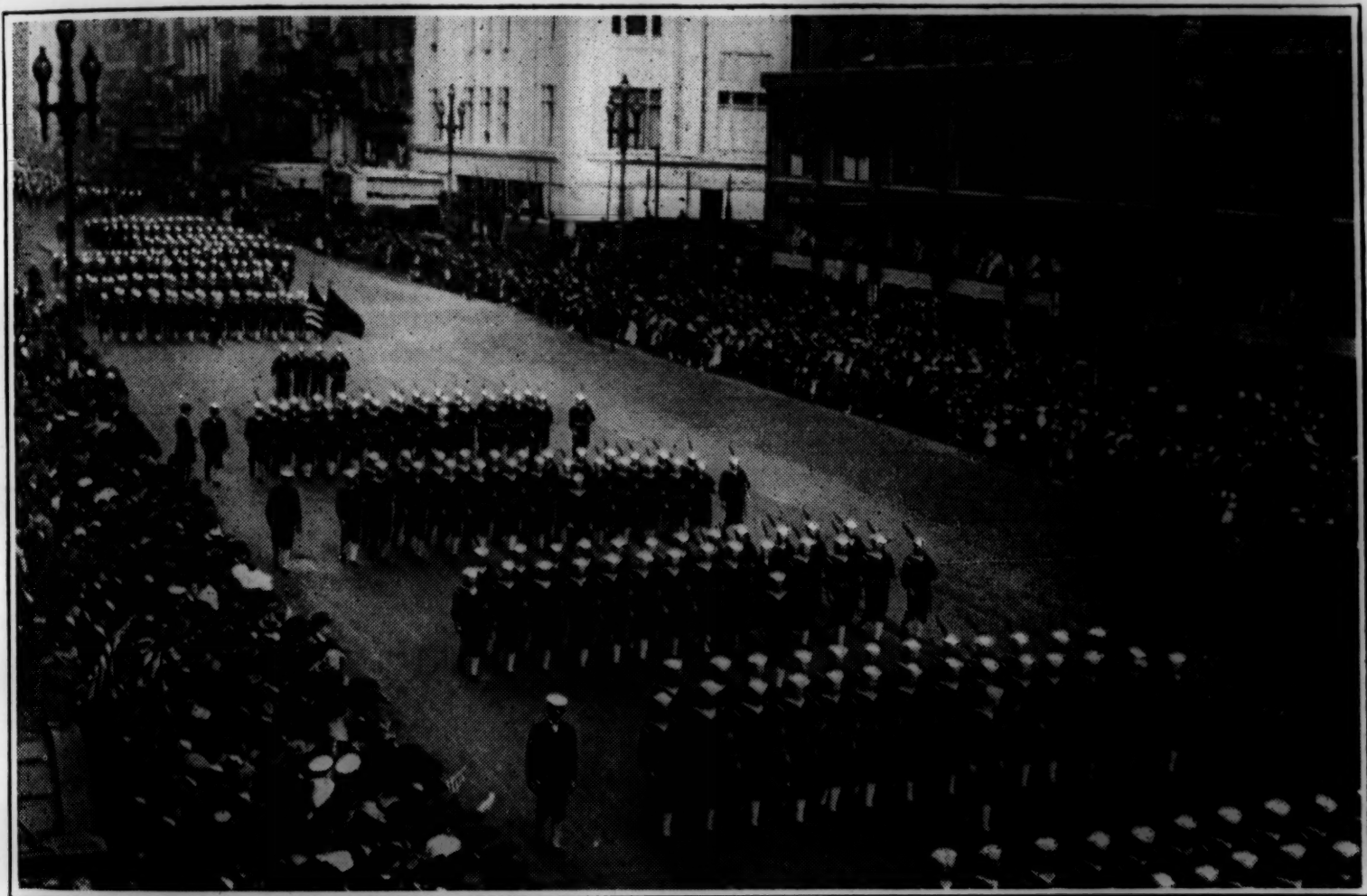


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# CALIFORNIA STATE BOARD OF HEALTH MONTHLY BULLETIN



We are proud, not only of these "bluejackets," but of all the men who are fighting for us, on land, sea and air. There are many factors in winning the war, none of which is more important than maintaining the physical fitness of these men.

**THE PUBLIC HEALTH DOLLAR  
TUBERCULOSIS CONTROL**



**DECEMBER, 1917**



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# CALIFORNIA STATE BOARD OF HEALTH

## MONTHLY BULLETIN

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No. 6

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# MONTHLY BULLETIN

CALIFORNIA STATE BOARD OF HEALTH

Devoted to the Prevention of Sickness and Death

Entered as second-class matter, August 15, 1905, at the post office at Sacramento, California, under the Act of Congress of July 16, 1894.

Sent free, on request, to any citizen of California.

WILBUR A. SAWYER, M.D., Secretary and Executive Officer . . . Editor

GUY P. JONES, Morbidity Statistician . . . Associate Editor

## **New Drinking Cup Law Not a Joke.**

Two saloon proprietors of Alameda made the mistake of telling the city health department's inspector that they regarded the new drinking glass sterilization law as a joke. They were promptly arrested and upon appearing in court they claimed that sterilizers for their saloons had been ordered, but that the apparatus had not been received. The court ordered them to appear at a later date to report if the law had been complied with.

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## **Fruit Should Be Kept Clean.**

Who wants to eat an apple that has been breathed on and polished with a rag? The less fruit is handled by man, the less is the danger of infection. The dust and dirt which settles on the exposed wares of many a city fruit stand is also unappetizing, if not positively dangerous. One sees occasionally parts of opened melons lying at the edge of the sidewalk and exposed to many sorts of contamination. Do not patronize the fruit dealer who does not protect his fruit against dust and flies and excessive handling. Support the enactment and enforcement of local ordinances for the protection of fruits and other foods.

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## **Our Hookworm Problem In the Mines.**

Hookworm in the mines of California has been under investigation by the State Board of Health for some time. Last year the investigation was carried on jointly by Dr. J. G. Cumming, then Director of the Bureau of Communicable Diseases of the State Board of Health, and Mr. Joseph H. White, Sanitary Engineer of the U. S. Bureau of Mines, also representing the California State Industrial Accident Commission. The results of this work, together with recommendations for improving conditions, have been published as Bulletin 139 of the Bureau of Mines, and can be obtained by applying to the Bureau in Washington. The work



of hookworm investigation and eradication is now being continued by the Division of Biology of the Bureau of Communicable Diseases of the State Board of Health, under the supervision of Professor C. A. Kofoed. As the work advances farther, reports will be made. Hookworm infection appears to be almost entirely limited to the deep mines of California and should be entirely eliminated.

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#### No Spitting and Tuberculosis Control.

Using the slogan "No Spit—No Tuberculosis" in a "campaign" against that disease comes near to disseminating misinformation. It is futile to fasten tuberculosis upon any one factor and to do so is to defeat one's own purpose in an educational campaign. Public health information is becoming more widespread and more people are daily learning the public health truths. Why not "More Food—Less Tuberculosis," or "Better Wages—Less Tuberculosis," or any one or all of a dozen other slogans that serve equally well?

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#### Fraudulent Cures For Tuberculosis.

The National Association for the Study and Prevention of Tuberculosis announces that not less than \$20,000,000 is invested in the business of manufacturing and exploiting fake cures for "consumption." The profits of these concerns is said to amount to \$15,000,000 annually, \$5,000,000 of which is spent for advertising. Since most of these nostrums contain alcohol in large amounts, they are doubly injurious. For the protection of both sick and well these fraudulent remedies should be abolished.

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#### The Menace of the Feeble-Minded.

Few people realize the demoralizing influence of the feeble-minded girl who is not properly segregated in an institution. One of the most difficult problems before the Bureau of Venereal Diseases is the control of feeble-minded girls, many of them already recognized as such but denied admission to the Sonoma State Home on account of its limited capacity. Another somewhat similar institution was provided for by the last legislature but will not be ready to receive patients for some time. Action should be taken to increase the capacity of the existing institution at once and to build at least an initial unit, temporary if need be, of the proposed new institution. A large number of feeble-minded girls have become delinquent while actually on the waiting list for admission to the state home. They deserve protection, as does also the community.

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#### Splendid Work by California Cities.

The program of the Bureau of Venereal Diseases would produce scant results, were it not for the cooperation of the health departments of the larger cities. The health departments of San Francisco and San Diego, situated near important army and navy camps, were the most prompt and active in starting organized venereal disease control. The Los Angeles Health



Department has perfected an excellent plan which will doubtless soon be in force. Many of the less populous centers are undertaking similar work on a smaller scale under the direction of the Bureau of Venereal Diseases and the State District Health Officers. The monthly report of the Bureau of Venereal Diseases in this number of the Bulletin gives a fuller account of these local activities. The aim of all this work is the reduction of venereal diseases in the civilian population and, above all, in the fighting forces on which our nation depends for its existence.

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**Ground Squirrels Scarce  
At Camp Fremont.**

A force of twenty men working under the California State Board of Health and the United States Public Health Service has gone over nearly all of the 27,000 acres constituting Camp Fremont near Palo Alto, for the purpose of eradicating ground squirrels—our despised food destroyers and disease disseminators. Poisoned grain was used on 22,000 acres of the tract, proving 95 per cent efficient, and 2,000 acres were worked over with asphyxiating-gas machines, these proving almost 100 per cent efficient. There is now little opportunity for our soldiers at Camp Fremont to make pets of California ground squirrels.

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**Sickness and  
The Food Supply.**

The rural population, the persons engaged in the production of foods, have always played an important part in our plan of living, and now the world shortage of food has made them more indispensable than ever before. This fact emphasizes the necessity of improving rural sanitation, in order that the health of food producers may be conserved so that there may be no losses through sickness. One of the best ways to increase the 1918 food supply in this state is to start measures now for the prevention of disease in every food-producing section of California.

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**Alameda to Employ  
A Health Visitor.**

Another city has advanced a step farther in its public health administration. In the near future a nurse, to be known as the Health Visitor, will be employed by the Alameda City Health Department. An examination for the position has been announced by Dr. A. Hieronymus, local health officer.

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**Preparing to  
Fight Mosquitoes.**

Mosquito abatement districts are already planning for the next season. The Doctor Morris Mosquito Abatement District at Bakersfield is organizing for the work. Mr. Stanley B. Freeborn and Mr. H. E. Woodworth, of the Department of Entomology of the University of California, visited Bakersfield on November 7 as representatives of the State Board of Health and made a report on methods which would be applicable to the local problem. The State Board of Health can always be called upon for this type of expert service. The mosquito is always a pest and frequently a health menace. It has no right to an undisturbed existence in the populous districts of California.



**Vivisection  
Again Assailed.**

In San Francisco there is an ordinance pending which would forbid any animal experimentation or vivisection under heavy penalty. It is almost unbelievable that those who desire to hamper the scientific prevention and cure of disease will be able to line up enough followers to pass such an ordinance. The good sense of the board of supervisors will doubtless prevent such a calamity. The introduction of such a bill, however, shows that there exists among us an active minority who do not favor accurate knowledge as the basis for preventive or curative medicine and who wish to force others to walk with them forever in the darkness of ignorance.

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**Los Angeles County  
Fights Venereal Disease.**

On the recommendation of Dr. J. L. Pomeroy, Health Officer of Los Angeles County, the supervisors appropriated \$3,600 on November 26th for carrying on venereal disease control in cooperation with the State Board of Health. The plans of Dr. Pomeroy include the establishment of a Division of Venereal Diseases in the County Health Office and the organization of centers in several parts of the county for the treatment and control of these diseases. Such a system should secure definite results.

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**Give Proper Nourishment  
to Inmates of Institutions.**

Scarcity of foodstuffs with resulting high prices and a patriotic desire to save as much food as possible for our allies will cause many attempts to economize in foodstuffs in public institutions. Curtailment and substitution will be justified in many places, but never at the expense of the proper nutrition of the wards of the people. To give appetizing food containing sufficient nourishment at the minimum expense should be the aim. Many mistakes will be made unless the changes are based upon expert advice. Prof. M. E. Jaffa, Consulting Nutrition Expert of the State Board of Health, is watching the dietaries of state institutions. Counties and cities are urged to secure advice from Professor Jaffa or other competent source before making any radical changes.



## HOW IS YOUR MUNICIPALITY SPENDING ITS DOLLAR FOR PUBLIC HEALTH?\*

JOHN NIVISON FORCE, M.D., Gr.P.H.; Assistant Professor of Epidemiology,  
University of California.

It has been my fortune in the past few years to meet quite a number of health officers. As a result of these encounters I have developed a rough classification comprising two groups: health officers who have no troubles and health officers who have. Members of the first group are rarely seen at state conferences—for obvious reasons. The many and adverse troubles of the second group at first glance appear to defy classification, but closer study reveals that there is such a possibility after all.

There is the health officer who blames his troubles on the people. He will tell you that reforms are possible in A but not in his city of B, where there is an entirely different population from anywhere else in the state. He can not get started without meeting terrible opposition from the "Dagoes" or "Portygees" or the "Scientists." Rather than stir up this opposition he must walk softly all the days of his life. I have heard on good authority that there are several foreigners in New York City, yet I have not heard of an instance where the health department of that village has failed to go to the bat in defense of its principles.

There is the health officer who blames it all on the city fathers. He will tell you that legislation along health lines is lost in the files, that there is "too much politics," that you can not get money for health purposes. Has he ever studied the psychology of governing bodies? It is a poor council indeed that does not have to be shown, and adequately shown. Perhaps the health officer's line of goods is not attractive, perhaps the council is smarting from a recent "sting." Has he ever tried dropping the *ex cathedra* attitude of the medical man and studying salesmanship? I have seen one little blueprint study of unit cost reduction surprise an extra thousand out of a city council, and it was a bad year, too.

Finally there is a third type of health officer and "may his tribe increase." "Glory be," says he, "I've located the fellow who is to blame for *my* troubles. I caught a fleeting glimpse of him this morning—it was in the looking-glass. I guess that the people in this town are as human as the people in every other town. I wonder if I have delivered the goods?" Then he subjects himself to a searching self-analysis and stands convicted on the following counts:

1. Practicing preventive medicine according to the standards and ethics of curative medicine. The self-effacing ethical physician is far removed from the ballyhoo man of a sideshow, yet the health officer must learn to strike the average.

2. Practicing preventive medicine without regard to the shifting of emphasis which has taken place in the past few years: a change which has displaced general sanitation in favor of applied social economics as the most important health department activity.

\*Read at the Ninth Annual Conference of State, County and Municipal Health Officials, Santa Rosa, September 25-28, 1917.



3. Practicing preventive medicine without reference to other communities which have met and conquered the same problems.

Having analyzed his own shortcomings, our repentant sinner is overjoyed to turn to the sins of his community. He decides that before asking his governing body for more money, it would be well to see if the available money is being spent to the best advantage. This brings him to a consideration of health surveys and such by-products as uniform accounting systems and studies of relative values. Shall we review the sources of his information?

Three agencies have conducted municipal health surveys in this country and have published reports available to the health officer. The Bureau of Municipal Research of New York City has published some notable administrative surveys. These range from a small fifty-page report on St. Paul's Health Department published in 1913 to the recently published voluminous report on the entire city and county government of San Francisco. The Department of Surveys and Exhibits of the Russell Sage Foundation of New York City published, in 1915, a survey of Springfield, Illinois, in ten parts. The section on public health by Mr. Franz Schneider, Jr., sanitarian of the Foundation, will repay careful reading.

The surveys of these two agencies have been made usually in response to requests from tax associations or other nonofficial bodies. The U. S. Public Health Service has, during the last two years, made a number of surveys of public health administration in states and cities and published the results in the Public Health Reports. These surveys, which are official in character, are made in response to requests, approved by the state boards of health, from the governing bodies of the municipalities concerned. As would be expected, these reports are technical and are addressed to sanitarians rather than the general public. It is an excellent plan to search the files of the Public Health Reports for surveys of cities of approximately the size of your own and compare conditions there with those known to exist in your community. Also to pay particular attention to the closing recommendations and see how many are applicable to your local conditions.

The surveys mentioned thus far have been of single communities. There have been several comparative surveys made recently which suggest a new field. Horwitz<sup>1</sup> compared the cities of Taunton and Quincy to determine why two cities of approximately the same climate, population, and age distribution should show marked difference in crude death rate, infant mortality rate, etc. His conclusions tend to show that the difference is a result of a variation in industrial conditions in the two communities.

Miss Mildred P. Stewart has submitted a thesis at the University of California in partial satisfaction of the requirements for the degree of master of arts in Public Health, in which the present cost of health administration in Alameda County (including cities) is shown to be several cents per inhabitant in excess of the cost of administration of a local health district formed from the county as a unit.

Schneider<sup>2</sup> has made a study of municipal health activities in relation

<sup>1</sup>Horowitz. A synoptic report on a comparative sanitary survey of two Massachusetts cities. *Am. Jour. Public Health*, 1917, vii, 698.

<sup>2</sup>Schneider. A survey of municipal health activities in the United States. *Am. Jour. Public Health*, 1916, vi, 1.



to population and shows that with increase of population comes increased responsibility for health protection.

TABLE I.

*Results of Survey of Municipal Health Activities According to Population Groups.*

Population group	Appropriation per capita, cents	Percentage of cities reporting work in:					
		Infant mortality	Inspection of school children	Laboratory diagnosis	Education	Dispensary	Tuberculosis
Over 300,000 -----	34.0	94.4	100.0	100.0	72.2	61.1	77.8
100,000 to 300,000 -----	26.7	69.2	94.9	82.5	32.5	50.0	43.2
50,000 to 100,000 -----	19.6	42.0	76.9	59.6	16.7	24.1	14.3
25,000 to 50,000 -----	19.3	25.5	70.6	49.5	17.6	22.8	12.2

Several outlines have been suggested as aids to homemade health surveys. Deaderick<sup>3</sup> has published a form which would be of value in collecting data but is rather too comprehensive for practical use. A beginner using this form would fail to see the forest because there were too many trees. Rosenau<sup>4</sup> has published a brief outline which is given to every student at Harvard Medical School in connection with the prescribed course in hygiene. Though only suggestive, it contains many ideas for the health officer's consideration, not the least important being a desire that all of our medical students might be taught to appreciate public health work by some such practical experience.

Having determined the scope of health activities in a community, the next step in a survey is a determination of the relative values. For this purpose the health expenditures may be classified according to the method suggested by Powers<sup>5</sup>. The amount expended for each item should then be reduced to its percentage of the entire amount expended for health purposes and the results compared with a standard. Chapin<sup>6</sup> has suggested such a standard score card based on his personal opinion as to the relative values of health department activities. His values are practically confirmed by Schneider<sup>7</sup>, whose study is based on the four factors: damage, preventability, cost, and communicability as applied to preventable disease. He assigns arbitrary values, however, to health education, physical examination of school children, vital statistics, dispensary service, and laboratory work, since these activities can not be rated in terms of disease prevention.

In our instruction of public health students, we have been using a score card of values of health department activities based on the suggestions of Chapin and Schneider, but differing in the arrangement of activities under major headings and also in the abolition of decimals.

<sup>3</sup>Deaderick. The Health Survey. Am. Jour. Tropical Diseases and Preventive Medicine. 1914, i, 627.

<sup>4</sup>Rosenau. The value of a sanitary survey in the teaching of hygiene. Jour. Am. Med. Assn., 1915, lxxv, 321.

<sup>5</sup>Powers. Uniform accounts as a basis for standard forms for reporting financial and other statistics of health departments. Washington. Government Printing Office. 1912.

<sup>6</sup>Chapin. Effective lines of health work. Providence Medical Jour., January, 1916.

<sup>7</sup>Schneider. Relative values in public health work. Am. Jour. Public Health, 1916, vi, 916.



With this card as a standard, Miss Louise McRoberts has prepared a table (Table II) from the published expenditures for 1915-16 of three of our East Bay cities. A glance at this table at once brings out two important points:

1. From one-third to one-fifth of the activities grouped under medical inspection which should be controlled by the health department are carried on by other agencies.

2. The activities, exclusive of those grouped under medical inspection which should not rate more than 30, are given 56 by Oakland, 54 by Berkeley, and 60 by Alameda.

In other words, our three communities are spending between 54 and 60 cents of their health dollar on those activities which have little relation to disease prevention, instead of the 30 cents which more nearly represents their relative values. On the other hand, instead of spending 70 cents on the activities listed under medical inspection, these communities are spending from 40 to 46 cents, and of this amount the health department in one city, at least, is controlling only 7 cents. Evidently something is wrong with us. We are either misplacing the emphasis in our spending or not spending enough on medical inspection, but as a good Berkeleyan and former resident of Alameda, I warn you not to point the finger of scorn at us before *you* are able to answer the question: "How is *your* municipality spending *its* dollar for public health?"

TABLE II.

*Public Health Expenditures of Three Municipalities Compared with a Standard of Relative Values.*

Standard for public health expenditures:

I. Medical inspection.		
1. Communicable diseases—		
(1) Medical inspection and visiting	-----	12
(2) Hospital	-----	6
(3) Immunization	-----	4
(4) Venereal diseases	-----	2
(5) Ophthalmia	-----	1
(6) Tuberculosis	-----	10
a. Visitors	-----	4
b. Dispensary	-----	3
c. Hospital	-----	3
2. Child hygiene—		
(1) Educational hygiene	-----	10
(2) Infant welfare	-----	20
a. Visitors	-----	10
b. Supervision of midwives	-----	2
c. Boarding	-----	1
d. Milk station	-----	1
e. Consultation	-----	4
f. Prenatal	-----	2
3. Dispensary service	-----	5
II. Food inspection.		
1. Milk		9
(1) Adulteration	-----	1
(2) Sanitation	-----	8
2. Other food sanitation	-----	1
III. Sanitary inspection		10
1. Privies, water, sewage	-----	4
2. Housing	-----	3
3. Plumbing, lighting, ventilation	-----	1
4. Nuisances	-----	1
5. Insects	-----	1
IV. Laboratory		5
V. Records and education		5
Total		100



TABLE II—CONTINUED.

## Public Health expenditures of Oakland:

Expenditures -----	\$90,459
Population -----	248,000
Expenditure per capita -----	36 cents
Average for cities of same population group -----	27 cents

## I. Medical inspection.

## 1. Communicable diseases—

## (1) Medical inspection and visiting—

a. Health officer -----	3	
b. Nurses (3) -----	4	
c. Sanitary inspector -----	3	

## 2. Child hygiene—

## (1) Educational hygiene -----

a. Director -----	3	--	17
b. Assistant -----	2		
c. Nurses -----	9		
d. Expenses -----	3		

## (2) Infant welfare -----

a. Nurses (4) -----	5	--	10
b. Social worker -----	1		
c. Dentists (2) -----	2		
d. Psychopathologist -----	1		
e. Expenses -----	1		

## (3) Dispensary service -----

a. Pharmacist -----	1	--	7
b. Nurse -----	1		
c. Clerk -----	1		
d. Janitor -----	1		
e. Expenses -----	3		

## II. Food inspection.

## 1. Milk -----

(1) Veterinarian -----	2	7	
(2) Inspectors (3) -----	5		

## 2. Food -----

(1) Meat inspectors (11) -----	15	21	
(2) Food inspectors (3) -----	6		

## III. Sanitary inspection.

## 1. Plumbing and sanitary inspectors (8) -----

		11	
--	--	----	--

## 2. Transportation -----

		3	
--	--	---	--

## IV. Laboratory -----

1. Salaries -----	3	4	
2. Supplies -----	1		

## V. Records and education -----

		6	
--	--	---	--

Totals -----		66	34
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## Public health expenditures of Berkeley:

Expenditures -----	\$18,672
Population -----	65,000
Expenditure per capita -----	28 cents
Average for cities of same population group -----	20 cents

## I. Medical inspection.

## 1. Communicable diseases—

## (1) Medical inspection and visiting—

a. Health officer -----	6	
b. Sanitary inspector ( $\frac{1}{4}$ time) -----	1	

## 2. Child hygiene—

## (1) Educational hygiene -----

a. School dentist -----	11	--	17
b. Physical instructor -----	6		

## (2) Infant welfare -----

a. Nurse ( $\frac{1}{2}$ time) -----	4	5	
b. Visitor ( $\frac{1}{2}$ time) -----	1		



3. Dispensary service -----		11
(1) Nurse ( $\frac{1}{2}$ time) -----	4	
(2) Visitor ( $\frac{1}{2}$ time) -----	1	
(3) Housekeeper -----	1	
(4) Expenses -----	5	
(5) Contract for emergency service -----	6	
II. Food inspection.		
1. Milk-----		
(1) City veterinarian -----	6	
(2) Milk inspector -----	6	
2. Food-----		
(1) Food inspector -----	5	
3. Transportation -----	2	
III. Sanitary inspection.		
1. Sanitary inspector ( $\frac{3}{4}$ time) -----	3	
2. Ant extermination -----	8	
3. Transportation -----	2	
IV. Laboratory -----	10	
1. Bacteriologist and chemist -----	5	
2. Assistant -----	5	
V. Records and education -----	12	
1. Salaries -----	8	
2. Supplies -----	4	
Totals -----	72	28
Public health expenditures of Alameda:		
Expenditures -----		\$7,117
Population -----		30,000
Expenditure per capita -----		23 cents
Average for cities of same population group -----		19 cents

I. Medical inspection.			
1. Communicable diseases-----		Health department	Other agencies
(1) Medical inspection and visiting-----			
a. Health officer -----		21	
2. Child hygiene-----			
(1) Educational hygiene -----		--	18
a. School nurse -----	17		
b. Supplies -----	1		
(2) Infant welfare.			
3. Dispensary service-----			
(1) Emergency hospital -----		1	
II. Food inspection.			
1. Milk-----			
(1) Veterinarian -----		10	
2. Food -----		19	
(1) Food inspector -----	11		
(2) Assistant -----	2		
(3) Transportation -----	6		
III. Sanitary inspection.			
IV. Laboratory -----		23	
1. Bacteriologist and chemist -----	17		
2. Supplies -----	6		
V. Records and education -----		8	
1. Salaries -----	4		
2. Supplies -----	4		
Totals -----		82	18



TABLE II—CONTINUED.

## Public Health expenditures of Oakland:

Expenditures -----	\$90,459
Population -----	248,000
Expenditure per capita -----	36 cents
Average for cities of same population group -----	27 cents

## I. Medical inspection.

## 1. Communicable diseases—

## (1) Medical inspection and visiting—

a. Health officer -----	3	
b. Nurses (3) -----	4	
c. Sanitary inspector -----	3	

## 2. Child hygiene—

## (1) Educational hygiene -----

a. Director -----	3	--	17
b. Assistant -----	2		
c. Nurses -----	9		
d. Expenses -----	3		

## (2) Infant welfare -----

a. Nurses (4) -----	5	--	10
b. Social worker -----	1		
c. Dentists (2) -----	2		
d. Psychopathologist -----	1		
e. Expenses -----	1		

## (3) Dispensary service -----

a. Pharmacist -----	1	--	7
b. Nurse -----	1		
c. Clerk -----	1		
d. Janitor -----	1		
e. Expenses -----	3		

## II. Food inspection.

## 1. Milk -----

(1) Veterinarian -----	2	7	
(2) Inspectors (3) -----	5		

## 2. Food -----

(1) Meat inspectors (11) -----	15	21	
(2) Food inspectors (3) -----	6		

## III. Sanitary inspection.

## 1. Plumbing and sanitary inspectors (8) -----

2. Transportation -----	3	11	
-------------------------	---	----	--

## IV. Laboratory -----

1. Salaries -----	3	4	
2. Supplies -----	1		

## V. Records and education -----

Totals -----	66	34	
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## Public health expenditures of Berkeley:

Expenditures -----	\$18,672
Population -----	65,000
Expenditure per capita -----	28 cents
Average for cities of same population group -----	20 cents

## I. Medical inspection.

## 1. Communicable diseases—

## (1) Medical inspection and visiting—

a. Health officer -----	6	
b. Sanitary inspector ( $\frac{1}{4}$ time) -----	1	

## 2. Child hygiene—

## (1) Educational hygiene -----

a. School dentist -----	11	--	17
b. Physical instructor -----	6		

## (2) Infant welfare -----

a. Nurse ( $\frac{1}{2}$ time) -----	4	5	
b. Visitor ( $\frac{1}{2}$ time) -----	1		



3. Dispensary service -----		11
(1) Nurse ( $\frac{1}{2}$ time) -----	4	
(2) Visitor ( $\frac{1}{2}$ time) -----	1	
(3) Housekeeper -----	1	
(4) Expenses -----	5	
(5) Contract for emergency service -----	6	
II. Food inspection.		
1. Milk-----		
(1) City veterinarian -----	6	
(2) Milk inspector -----	6	
2. Food-----		
(1) Food inspector -----	5	
3. Transportation -----	2	
III. Sanitary inspection.		
1. Sanitary inspector ( $\frac{3}{4}$ time) -----	3	
2. Ant extermination -----	8	
3. Transportation -----	2	
IV. Laboratory -----	10	
1. Bacteriologist and chemist -----	5	
2. Assistant -----	5	
V. Records and education -----	12	
1. Salaries -----	8	
2. Supplies -----	4	
Totals -----	72	28

## Public health expenditures of Alameda:

Expenditures -----	\$7,117
Population -----	30,000
Expenditure per capita -----	23 cents
Average for cities of same population group -----	19 cents

I. Medical inspection.		
1. Communicable diseases-----		
(1) Medical inspection and visiting-----	Health department	Other agencies
a. Health officer -----	21	
2. Child hygiene-----		
(1) Educational hygiene -----	--	18
a. School nurse -----	17	
b. Supplies -----	1	
(2) Infant welfare.		
3. Dispensary service-----		
(1) Emergency hospital -----	1	
II. Food inspection.		
1. Milk-----		
(1) Veterinarian -----	10	
2. Food -----	19	
(1) Food inspector -----	11	
(2) Assistant -----	2	
(3) Transportation -----	6	
III. Sanitary inspection.		
IV. Laboratory -----	23	
1. Bacteriologist and chemist -----	17	
2. Supplies -----	6	
V. Records and education -----	8	
1. Salaries -----	4	
2. Supplies -----	4	
Totals -----	82	18



## WHAT HAS BEEN ACCOMPLISHED IN THE CONTROL OF TUBERCULOSIS DURING THE PAST YEAR.\*

MRS. E. L. M. TATE-THOMPSON, Director of the Bureau of Tuberculosis, State Board of Health.

The awakening of a social consciousness for adequate tuberculosis control in California is, after all, analogous to the awakening of our Rip Van Winkle. Here is a state dipped in sunshine, with magnificent distances, with no necessity for overcrowding, with none of the hardships endured where winter means discomfort and the grim spectre of the White Plague always present. But, like Rip Van Winkle and his twenty years of slumber, California finds herself confronted with the problem brought on by twenty years of slumbering, twenty years of apathy, twenty years of inadequate care, twenty years of suffering from the advice of Eastern physicians who sent patients in the last stages of tuberculosis to come west to die.

Tuberculosis control in California then must extend outside the boundaries of the state. It must recognize the awakening made by the great International Tuberculosis Congress in Washington in 1908, to stimulate all the representatives from the various states to arouse them from the lethargy of their own benighted condition, to banish the idea that the only place the patient, rich or poor, might go and hope for recovery was "out west." Certainly tuberculosis control in California began then, for in many states provision was made the following year for that most expensive form of treatment, the state sanatoria, where only the privileged few might enter and take treatment, either to cure or arrest the progress of the disease.

The states endeavoring to control tuberculosis through the medium of the state sanatoria, have seen the futility of endeavoring to care for the second- and third-stage cases. Long distances to travel, coupled with homesickness, the impossibility of reaching the patient easily if the family needed to be summoned, was balanced by the tremendous overhead expense of maintaining a state institution, where at best, the proportion of beds could be only provided according to population.

California has been able, therefore, to profit by this effort in tuberculosis control by endeavoring to reach what has seemed the most necessary group of patients in the state—first, the far-advanced case, and second, to control, as far as possible that menace to all communities—the nonresident indigent, sincere in his efforts to find the never-ending hope of all consumptives, that elusive thing called "climate," where, when the right one is found, all evidences of tuberculosis vanish.

There still remain in California numbers of people sincerely interested in tuberculosis control, who look forward to the state taking the entire responsibility in handling tuberculosis, but even that group must admit that the crying need at present in every community of the state is more beds. Consequently, the bureau is glad to report on the results of the past year and a half.

\*Read at the Ninth Annual Conference of State, County and Municipal Health Officials, Santa Rosa, September 25-28, 1917.



Financial results have been obtained in securing appropriations that will not only materially increase the bed capacity, but, better still, lift the tuberculosis wards, wretched and miserable as they have been, many without the common decencies of life, some without even the necessities, into a standard of comfort and cleanliness, making of them hospitals in every sense of the word, where treatment, care, diet and surroundings are adapted to the needs of the special class.

Alameda County within a very short time will open a magnificent new sanatorium, separate from any of the county's other institutions. It will have a capacity of, at least, 150 beds.

Santa Clara has a new hospital with a capacity of 60 beds.

Fresno has had for a year and a half a 50-bed hospital and an appropriation has just been made for a 40-bed hospital for children.

Los Angeles, Santa Barbara and Ventura have just appropriated funds for a joint county sanatorium with a capacity of 300 beds.

San Bernardino and Riverside will be ready by Christmas with a new 80-bed joint county hospital.

San Diego is also building a magnificent new sanatorium, separate from the county hospital, with a capacity of 60 beds.

Sacramento, Yolo, Amador, El Dorado, Contra Costa, Tuolumne, Plumas, Placer and Yuba counties are combining in the north with a 200-bed institution, where special provision will be made for Indians. There also will be an open-air school for tuberculous children in all of the larger institutions.

Already in California we have seen a decline in our tuberculosis death rate. Nearly every city in the state has its clinic and so well is the state covered with public health nurses that this fall we find requests for rural nurses coming from the smaller counties. These two important factors in the campaign against the White Plague must strike a telling blow in the next ten years.

The Modern Health Crusader movement in our schools, the work done by the State Tuberculosis Association and its local societies throughout the state when over \$50,000 was spent by them this past year, coupled with the efforts of the Bureau of Tuberculosis to combine responsibility, to work directly in the control of tuberculosis through the establishment of more hospital beds and the indirect work done by the nurses in discovering the predisposed child, in bettering home and school conditions, gives us a hopeful outlook in the next five years for a further decline in the death rate. We have seven county hospitals operating under the subsidy with a capacity of 347 beds. We shall have from this year's appropriations 830 beds more, very soon, and we live in hopes of seeing before another two years, in San Francisco, the completion of their new 250-bed hospital. This will give us 1,427 beds, and since these hospitals are to operate under the state subsidy, it means 1,427 hospital beds in good buildings with all that the Bureau of Tuberculosis' standard requires—adequate medical treatment, good nursing, a balanced diet and the stigma removed from taking the cure in a county institution. The bureau hopes the day is not far distant when a county sanatorium will be like a public school, and that all feeling regarding these former wretched places will be overcome by the change in care and treatment.



## THE STATE BOARD OF HEALTH AND THE UNDERTAKER.\*

GEORGE D. LESLIE, State Registrar.

California is not provincial but rather very cosmopolitan indeed. Our people have come not only from every state in the Union but even from all parts of the world. The great showing of Native Sons and Native Daughters of the Golden West in an Admission Day parade does not obliterate the cold statistical fact that the Argonauts and their descendents form much less than half the resident population. The stream of migration moving here is so great that native Californians barely surpass the total for other Americans, with foreign-born immigrants also very numerous.

The Federal Census of 1910 showed this distribution of our inhabitants: Born in California, 905,996, or 38.0 per cent; born in other states, 887,121, or 37.3 per cent; and foreign born, 586,432, or 24.7 per cent. Hence native Californians form but a little more than three-eighths of all and other Americans slightly less than three-eighths, the remaining one-fourth having been born abroad. Of the whole forty-eight states only twelve surpass California in the proportion of domestic immigrants, or residents born in other states, the twelve being North and South Dakota, Kansas, Oklahoma, Montana, Idaho, Wyoming, Colorado, Arizona, Nevada, Washington and Oregon. Furthermore, only eight states excel California in the proportion of foreign immigrants, or inhabitants born abroad, these being Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Minnesota, North Dakota and Montana.

The preponderance of other Americans and the foreign born over native Californians is still greater in more recent figures from death returns for 1916. The white decedents in this state last year were classified by nativity as follows: Other states, 14,991, or 39.9 per cent; foreign countries, 12,148, or 32.3 per cent; California only 9,469, or 25.2 per cent; and unknown, 983, or 2.6 per cent. Thus, other Americans formed two-fifths of all white decedents and the foreign born nearly one-third against only one-fourth for native Californians. The contrast is greater yet in per cents for Los Angeles City, thus: Other Americans, 52.0, or over half; foreign born, 28.5; native Californians, only 16.9, or one-sixth; and unknown, 2.8. The per cents for the balance of Los Angeles County are still more striking, as follows: Other states, 61.0, or three-fifths; foreign countries, 22.3; California, only 15.3, or one-seventh; and unknown, 1.4.

Moreover, many people die in California, especially south of Tehachapi, after having lived here only a few months or years. For the whole state in 1916 the length of residence was under 1 year for 1,482 decedents, or 3.7 per cent of all, and only 1 to 9 years for 7,172, or 18.0 per cent. Hence over one-fifth, 21.7 per cent, of all California decedents last year had lived here less than ten years. For the territory south of Tehachapi the length of residence was less than a year for 945 decedents, or 6.4 per cent of all, and only 1 to 9 years for 4,342, or

\*Read at Thirteenth Convention of California Funeral Directors' Association at Marysville, September 26, 1917.



29.3 per cent. Hence considerably over one-third, 35.7 per cent, of all decedents in southern California were residents of less than ten years' standing.

Death records for such people are needed in complete and satisfactory form not only for statistical purposes in connection with health activities here, but also for legal purposes in proving deaths to collect insurance, settle estates or establish rights both in other states and in foreign countries. Various foreign consuls are the State Registrar's most regular applicants for certified copies of death certificates. People in Eastern states send many inquiries, also, for information about missing relatives last heard from out West and sometimes found from our records to have died in California.

California was admitted to the United States registration area for deaths in 1906 along with Pennsylvania and ahead of important states not admitted until later, like Wisconsin, 1908, Ohio, 1909, Minnesota, 1910, Missouri, 1911, and Virginia, 1913. The territory with systematic registration of deaths, kept up to a prescribed standard of completeness, included for 1915 some twenty-four states as well as North Carolina for cities of 1,000 population, together with Washington, D. C., and 41 cities in nonregistration states. Although the death registration area covers only about two-fifths (41.3 per cent) of the land surface, it comprises over two-thirds (67.1 per cent) of the total population of continental United States. The twenty-four states with adequate death registration laws duly enforced are the six New England states with New York, New Jersey, Pennsylvania, Ohio, Indiana, Michigan, Wisconsin and Minnesota in a continuous chain as well as Maryland, Virginia, Kentucky, Missouri, Kansas, Colorado, and Utah in a parallel tier, besides Montana, Washington and California further west.

There is also a registration area for births, covering only one-tenth of the land surface but including 31 per cent of the total population. The birth registration area for 1915 included the six New England states, together with New York, Pennsylvania, Michigan and Minnesota, or ten states in all, as well as Washington, D. C. However, Maryland, Virginia, and Kentucky have been added for 1916, with Indiana and New Jersey under investigation. Several other states await admission with California an early possibility or probability.

The 1917 amendments of the registration law were made largely to improve the completeness of birth returns, especially in rural territory. Provision was therefore made for the subdivision of rural territory into primary rural registration districts with local registrars specially appointed for four-year terms. Heretofore rural territory has been exclusively under the jurisdiction of the county recorder as local registrar with subordinate subregistrars at convenient points remote from the county seat. Former subregistrars attending only to prompt filing of death certificates and the issuance of burial or removal permits will be selected in many cases for appointment as local registrars reporting direct to the state bureau for both births and deaths in their respective districts. The inauguration of the new system is set for January next when the principal counties at least will be subdivided into primary rural registration districts so far as necessary to promote efficient and convenient registration of all births and deaths.



Attention has been drawn to the large proportion of outsiders or newcomers among persons living in California and also among those dying here. So many bodies, consequently, are shipped East from California for final interment in the old home cemeteries that there is general recognition of the need for the State Board of Embalmers' Act of 1915. The regulation of embalming here is absolutely necessary to expedite shipments and prevent delay at the destination for want of proper preparation of the body by a qualified embalmer duly licensed. Similarly, on account of these very same shipments there must also be due regard to the faithful administration of the Vital Statistics Registration Law of 1915 as amended in 1917. One amendment in 1917 struck out a provision in effect ever since 1905 by which the approval of the State Registrar, in writing or otherwise, was a necessary legal prerequisite for the final interment of a body shipped in from another state. Conversely, bodies may now be shipped out from California to other states without formal permission from the State Registrar at Sacramento, provided, of course, that the undertaker has complied with the rules of the State Board of Embalmers and has obtained or arranged for the consent of the health authorities at the destination. Yet the transportation permit may cause persons interested some annoyance or delay at the destination, for apparent irregularity, if the same name appears upon it for the undertaker and the subregistrar. It is not desirable that the same person should be in the anomalous position of filing death certificates with himself and of issuing to himself the required permit in any case. It is necessary, rather, that some responsible official should examine each death certificate for completeness and satisfactoriness before any permit can legally be issued.

Strict enforcement of the amended law is enjoined by its terms upon the State Registrar and each local registrar as to both births and deaths. The law allows physicians and midwives only thirty-six hours for filing birth certificates, but gives undertakers seventy-two hours for filing death certificates, besides requiring physicians, by a new proviso, to deliver death certificates duly signed to undertakers within fifteen hours after death. The thirty-six and seventy-two hour limits are not being enforced strictly to the extent of holding stop watches on either physicians or undertakers where good faith is shown by regular filing promptly of complete certificates, with any chance delay fully explained by some special circumstance. However, local registrars are being required to forward on the fifth of each month certificates for all births and deaths occurring in the district to the very last day of the preceding month. This means that even in country districts all certificates must be filed within at least five days whether for a birth or a death. With prompt filing of complete birth certificates being demanded from a vast host of physicians and midwives, some of whom may attend maternity cases only rarely, immediate filing of satisfactory death certificates must likewise be required of undertakers much less numerous, each with an established business that necessarily involves familiarity with legal requirements, boundaries of registration districts, and jurisdiction of local registrars or subregistrars.

The amended law provides for an additional local record for residents of cities of 2,500 population who may die or have a child born in another registration district, local registrars for these cities being



furnished with copies of certificates in such cases by the State Registrar. This will require close attention to be given by physicians and undertakers hereafter to the necessity of filling out item 18b in the lower right-hand part of each death certificate. The special information for hospitals, transients or recent residents includes a statement of where disease was contracted, if not at place of death, and also of the former or usual residence, giving city or state of residence.

The constitutionality of the registration law was sustained recently as to fees of local registrars in *Boss vs. Lewis*, 24 California Appellate Decisions 935. With the removal of former uncertainty about fees there must necessarily be closer examination of certificates as to omission of required items before the State Registrar can make quarterly certifications for fees payable to local registrars and now receivable by them. Undertakers may therefore expect local registrars to demand completeness in death certificates not only for item 18b in the lower right-hand part, but also in the lower left-hand part for item 18a, length of residence at place of death and also in California. Undertakers can aid the State Registrar and save their own time by remembering that for every decedent born in this state the length of residence in California is given best in the short word "life" rather than by writing out figures for years, months or days. Similarly, for decedents reported as born in any foreign country like England, Scotland, Ireland, France, Russia, Holland, Germany, Austria, Hungary, Sweden, Norway, Denmark, China, Japan, India, the birthplace of each parent may be given as the same foreign country rather than as "unknown" and certainly in preference to leaving spaces entirely blank. Likewise, item 6, date of birth, should always be shown in addition to item 7, age. These minor points are mentioned because slight attention to details by the undertaker in the first place may save him from being required subsequently to supply further particulars.

The Model Law in effect now over two-thirds of the whole population has been modified in California ever since 1907 by a special proviso permitting the temporary removal of a body for preparation for shipment from one registration district to a contiguous district in the same or an adjoining county. The California law requires of course that before actually shipping or burying the body the undertaker must file the death certificate with the registrar of the district where the death occurred so as to obtain from him as the only registrar having legal authority the necessary permit in the case. Adherence to the principle that each certificate must be filed promptly with the registrar of the district where the event occurred is absolutely essential to the maintenance of a perfect system of registration whether for births or deaths. Each local registrar is held officially responsible for obtaining the certificate for every birth or death which occurs in his district. Definite jurisdiction and single authority are needed by the local registrar to prevent evasions or omissions through certificates being filed late or filled out only in part. Certainly as to the local registrar with whom alone certificates should be filed according to the place where the birth or death occurred is also a convenience to physicians and undertakers in avoiding confusion and erroneous filing, since they might be called to account for resulting delay in the proper registration of cases attended by them.



Patriotic Americans may well be proud that the United States is the nation destined to save the world from militarism and to preserve inviolate liberty and justice. Loyal Californians must likewise be glad to have our state keep faith with the whole nation and with foreign countries, too, in the registration of vital statistics along approved systematic lines as found in many other states and most foreign countries. America stands high among nations of the world and California must also keep pace with leading states of the Union in matters of such great importance nowadays as the proper registration of all births and deaths.

### WHAT SOME COMMUNITIES OF THE WEST AND SOUTHWEST HAVE DONE FOR THE PROTECTION OF THE MORALS AND HEALTH OF SOLDIERS AND SAILORS.

BASCOM JOHNSON, Attorney, The American Social Hygiene Association.

\* \* \* California has been one of our most progressive states. In line with its progressive policy, California was first to meet Secretary of War Baker's request for complete state cooperation in protecting the health and morals of the soldiers. Immediately after the receipt of Secretary Baker's letter, Governor Stephens of California sent a strong letter to all the law-enforcing officials throughout the state, urging them to do everything in their power to protect the soldiers and sailors from vicious influences. In order to make this cooperation effective Governor Stephens, upon the nomination of the Chairman of the State Council of Defense, appointed a committee of seventeen citizens to carry on for the state the work which the Commission on Training Camp Activities is carrying on for the nation. That this committee as well as the national commissions might keep in close touch with actual conditions near military and naval posts within its borders, the Governor agreed to appropriate from funds within his control a sufficient sum to employ an executive secretary who should be a man mutually acceptable to the state committee and the national commissions of the War and Navy departments. The purpose of this arrangement is to link together state and national activities and to insure effective and harmonious action along the lines laid down in Secretary Baker's letter. This state committee has organized, divided into subcommittees, and has gone actively to work with substantial results. The Governor and the State Board of Control have just agreed to appropriate thirty thousand dollars annually for the period of the war for the maintenance of a bureau of venereal diseases in the State Board of Health. These arrangements provide the administrative machinery to give effect to the resolutions adopted. Thus California has answered the nation's call for the protection of its military and civil citizenry from vice and disease.

Oregon, Washington, and Arkansas have under consideration the organization of state committees, similar to that appointed in California. With the formation of such state committees throughout the country, the requests of the Secretary of War and the Secretary of the Navy will surely result in sympathetic, intelligent, and effective cooperation between state and nation in providing and maintaining clean and wholesome environments for the men in training. \* \* \*



**ROLL OF HONOR.****Enlistments in Military and Naval Service.****HEALTH OFFICERS.**

- Dr. R. Selden Anthony, City Health Officer, Los Gatos.  
Dr. Ralph W. Avery, City Health Officer, Oxnard.  
Dr. A. E. Banks, City Health Officer, San Diego.  
Dr. W. E. Coppedge, County Health Officer, Modoc County.  
Dr. Rafael Dufficy, Assistant County Health Officer, Marin County.  
Dr. D. B. Fields, County Health Officer, Trinity County.  
Dr. J. Roy Jones, County Health Officer, Siskiyou County.  
Dr. B. E. Merrill, City Health Officer, Santa Paula.  
Dr. H. P. Palmer, City Health Officer, Vacaville.  
Dr. Joseph A. Parks, City Health Officer, La Mesa.  
Dr. Chas. Pius, City Health Officer, Montague.  
Dr. F. M. Seibert, City Health Officer, Mayfield.  
Dr. W. J. Stone, City Health Officer, San Rafael.  
Dr. Jackson Temple, City Health Officer, Santa Rosa.  
Dr. Carl T. Wallace, County Health Officer, Humboldt County.  
Dr. D. W. Zieker, City Health Officer, Merced County.

**MEMBERS OF LOCAL BOARDS OF HEALTH.**

- Dr. Jas. G. Anderson, Petaluma.  
Dr. Raymond Babcock, Willits.  
Dr. Roy Cox, San Luis Obispo.  
Dr. Henry Ehlers, Fowler.  
Dr. E. R. Fountain, Merced.  
O. A. Gierlich, El Monte.  
Dr. R. W. Horner, Ventura.

**STAFF MEMBERS OF LOCAL BOARDS OF HEALTH.**

- Dr. Nathan P. Barbour, Assistant Chemist, San Francisco.  
Dr. E. J. Best, Emergency Surgeon, San Francisco.  
Ada B. Coffey, Tuberculosis Nurse, San Francisco.  
Edward A. Collins, Emergency Hospital Steward, San Francisco.  
L. H. Gadsby, City Health Department, Visalia.  
Dr. H. C. Krummes, Emergency Surgeon, San Francisco.  
Dr. E. S. Loizeaux, Bacteriologist, Sacramento.  
Dr. Francis J. McCarthy, Emergency Surgeon, San Francisco.  
William Meehan, Emergency Hospital Steward, San Francisco.  
Emiel C. Norwood, Chief Chemist, San Francisco.  
Elsie E. Richards, Health Department, Oakland.  
Dr. W. A. Sampson, Emergency Surgeon, San Francisco.  
Andrew Smith, Health Department, Oakland.  
Leo J. Thomas, Emergency Hospital Steward, San Francisco.  
Arthur J. Walsh, Emergency Hospital Steward, San Francisco.  
Alanson Weeks, M.D., Chief Surgeon, San Francisco.  
Lambert Wierda, Building Inspector, Richmond.

**STAFF, STATE BOARD OF HEALTH.**

- Dr. James G. Cumming, Director, Bureau of Communicable Diseases.  
Joseph Domann, Assistant Engineer, Bureau of Sanitary Engineering.



### SMASH THE LINE!\*

The primary objective of the American men on the western front is to smash the enemy's line, to drive him back, weakened in morale and strategic position, until he is finally beaten.

The chiefs of the allied armies have been forced to rank suppression of vice and prevention of venereal diseases among the great problems of the war.

Venereal diseases are the "camp-followers" of prostitution and alcohol. They are a triple alliance behind the lines, and as much the foes of an army as the enemies in front.

Prostitution, alcohol and venereal diseases must be beaten, just as the enemy in front must be beaten, or they may cripple, even defeat, an army.

A soldier with syphilis or gonorrhea, and one with a wound, are both out of the fighting and a drain on an army. But the former is the more serious, for his disability was preventable and in acquiring it he did not register a blow against the enemy in front but literally gave a victory to the enemy behind the lines. Nor does the consequences of his defection end there, for he may become a carrier of disease among his comrades.

During the first year of the war one nation had more men disabled from venereal diseases than from wounds and disabilities incident upon warfare.

A regiment stationed in a training camp sustained greater casualties from venereal diseases than did another (recruited at the time) in one of the bloodiest battles of the war.

The stronghold of this triple alliance for evil is the segregated or red-light district—the so-called "line." Here, prostitution, fortified by official tolerance and supposed medical inspection, is strongest. It is in this segregated district, popular misconception to the contrary, that venereal diseases have their widest opportunity to spread, insidiously as a poison-gas attack, and wreak greatest havoc. A careful study shows that the majority of infections have resulted from commercialized vice, for the medical inspection of prostitutes is inevitably inadequate and futile. It is in the segregated district, too, that alcohol is invaluable as an aid to prostitution.

Remember that this problem of prostitution is a problem of public health as well as of morals; that the venereal diseases, in their malignancy, communicability, prevalence, and after-effects, constitute a more serious menace than any of the well-known diseases, such as typhoid, tuberculosis, or smallpox, all of which the community is fast learning to control.

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\*Extract from a pamphlet with the same title issued by the War Department on Training Camp Activities.



## CONTROL OF THE CALIFORNIA GROUND SQUIRREL.\*

JOSEPH DIXON, Berkeley.

## Methods of Control.

The five most effective methods of destroying ground squirrels are: (1) poisoning with strychnine; (2) fumigation with carbon bisulphide; (3) trapping; (4) shooting; (5) encouragement of the natural enemies of the ground squirrel.

## Which Method to Use, When, and Why.

1. Carbon bisulphide is most effective when the soil is damp. When the ground is dry the gas escapes through the cracks in the ground.
2. Strychnine-coated barley is best used during the dry season because at this time the squirrels gather and store grain and hence are easily

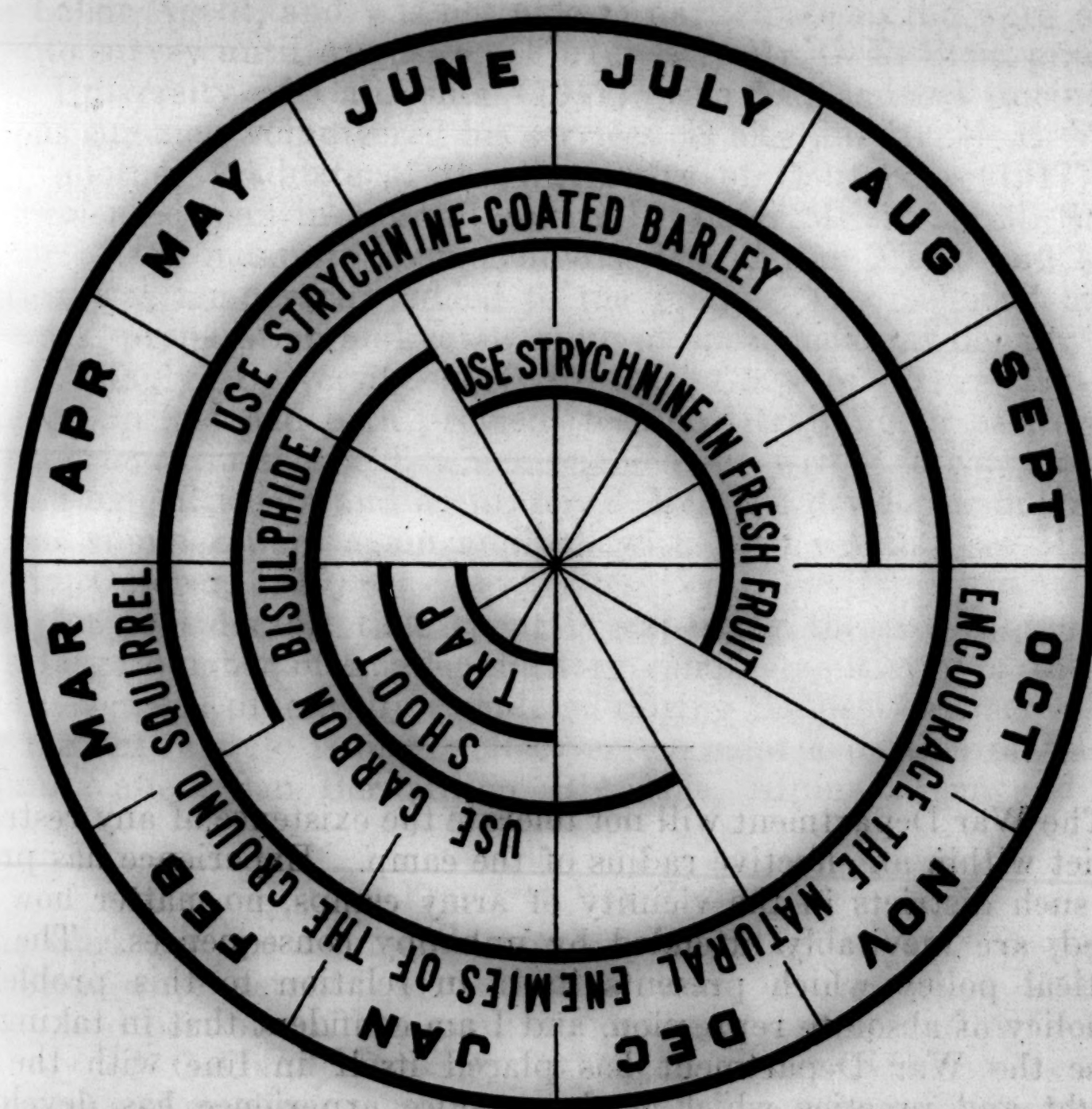


Diagram showing methods of destroying ground squirrels to be employed at different seasons of the year.

poisoned through their cheek pouches when in the act of carrying the poisoned grain. Rain and heavy fogs tend to wash the strychnine off the poisoned grain.


\*From "Control of the California Ground Squirrel," by Joseph Dixon, Circular No. 181, University of California, College of Agriculture.



3. Trapping and shooting are effective at any time, but are from six to twelve times more so before the young are out, April 1, than later in the season.

4. Powdered strychnine (sulphate) in fresh vegetables and fruit is especially effective in the dry season when green food is scarce.

5. Red-tailed hawks, golden eagles, badgers, weasels, and other natural enemies of the ground squirrel will prove valuable allies in the war on ground squirrels if they are only allowed to live. It costs little to let them alone, to go about their business in the natural way.



“The War Department will not tolerate the existence of any restricted district within an effective radius of the camp. Experience has proved that such districts in the vicinity of army camps, no matter how conducted, are inevitably attended by unhappy consequences. The only practical policy which presents itself in relation to this problem is the policy of absolute repression, and I am confident that in taking this course the War Department has placed itself in line with the best thought and practice which modern police experience has developed. This policy involves, of course, constant vigilance on the part of the police, not only in eliminating regular houses of prostitution, but in checking the more or less clandestine class that walks the streets and is apt to frequent lodging houses and hotels.”

NEWTON D. BAKER.

Extract from a letter sent by the Secretary of War to the mayors of the cities and the sheriffs of the counties in the neighborhood of all military training camps. August 10, 1917.



## THE MOSQUITO SURVEY OF CALIFORNIA.

### AN ACCOUNT OF THE SECOND SEASON'S WORK.

WILLIAM B. HERMS, Associate Professor of Parasitology, University of California,  
and Consulting Parasitologist, State Board of Health.

Although the mosquito investigations of the past summer began nearly two weeks later than the work of the previous summer, circumstances made it possible to prolong the work of the state-wide mosquito survey much longer at the end of the season. Owing to unusual conditions brought about by the war, some changes were necessary in the personnel and more time was given to intensive work in the vicinity of cantonments and other smaller military camps. Because of special proficiency in that connection, Mr. S. B. Freeborn was engaged in a study of certain labor problems under the direction of Professor R. L. Adams, State Labor Agent, and was not able to participate in the work of the mosquito survey until August 8. Fortunately Mr. O. R. Blois, graduate of the University of California (1917), who had assisted during the previous summer, volunteered his services, as also did Mr. H. E. Woodworth, another graduate of the University of California (1917) and an experienced man in mosquito control. Later Mr. Noble M. Stover, director of the mosquito abatement districts of San Mateo and Marin counties, was temporarily added to the group. The technical laboratory work, preparation and cataloguing of specimens was done by Miss Melinda Magly, University of California, Class of 1915. Thus the entire group had had both previous technical training in parasitology and experience in the field, which enabled the writer to carry out his program expeditiously and accurately. Methods developed during the previous summer were again applied, with good results (see Monthly Bulletin, October, 1916).

But for considerable time spent in experting the two cantonments and a large number of smaller military camps, the survey of the state would have been practically completed during the past summer. However, the entire state is now well covered except a portion of the San Joaquin Valley, San Bernardino, Riverside, Alpine, Mono and Inyo counties.

#### San Francisco Bay Region.

The work for the summer began May 21 when Messrs. Woodworth and Blois were detailed to begin the work of inspecting Alameda County and portions of the counties bordering it. This work included a survey of Oakland, Berkeley, Alameda, Hayward, San Leandro, Richmond and smaller communities. Heretofore no anopheline mosquitoes had been reported from Alameda County, but in this survey as well as in later inspections anophelines were discovered at Niles and near Pleasanton. Much of the work in the area immediately adjacent to San Francisco Bay concerns itself with salt marsh mosquitoes. Indeed this area would be almost free from mosquitoes if it were not for the salt marsh species.

By June 6 the automobile which had been used in the survey during the previous summer and in hookworm investigation during the winter



and spring was again put in repair and the equipment for collecting, etc., was ready. On this date the party left Berkeley direct for the Imperial Valley, going via San Jose, San Luis Obispo, Los Angeles and San Diego, arriving at El Centro on June 10, having made no mosquito collections except in the vicinity of San Diego before entering the valley.

Anopheline mosquitoes were encountered at several points along the way from San Diego to Campo, but none of these from there on to the valley, and while mosquitoes were found in abundance in the Imperial no anophelines were discovered. A careful survey of the valley was made, including the following points: Coyote Wells, Dixieland, El Centro, Meloland, Holtville, Calexico, Imperial, Brawley and Calipatria. While conditions seemed favorable for the development of anopheline mosquitoes in the vicinity of Holtville, none was found either at that point or elsewhere in the valley. The county health officer reported no endemic malaria. Large numbers of mosquitoes (*Culex*) were found in the alfalfa fields, particularly in the vicinity of Holtville where much standing or sluggishly flowing water occurs, owing to the condition of the water table.

Investigations in San Diego County showed anophelines to occur in many parts, as far south as the Mexican border opposite Tia Juana and westerly from that point to Cottonwood (Barrett P. O.) nearly to Campo. Anophelines were found in abundance in the city of San Diego (Balboa Park and near the Country Club) and northward along the coast to Orange County and inland to the boundary line between Riverside County and San Diego County. *Anopheles pseudopunctipennis* and *Anopheles quadrimaculatus* were found, the latter within about twelve miles of Linda Vista.

#### Work in Military Camps.

From July 7 to July 17 the work consisted in an investigation of sanitary conditions (particularly with regard to flies, mosquitoes and disposal of camp sewage) of the smaller military camps situated in the district extending from Sacramento to Andover, near Truckee. A number of poorly-kept latrines were seen and suggestions given for improvement. Flies were found breeding in abundance in camp garbage and anopheline mosquitoes were found breeding within a few feet of the tents in several cases. Existing conditions showed little knowledge of camp sanitation, but all officers concerned were eager to receive instruction and in some instances improvements were made before the writer left camp. Verbal reports were made to Colonel Lynch, Chief Sanitary Officer, Western Department, U. S. A., San Francisco.

Our party left July 18 for a second trip to San Diego in order to expert the cantonment site at Linda Vista and other military camps in that vicinity. On the way collections of mosquitoes were made, with the result that anopheles were taken near San Jose (Santa Clara County), San Juan, Hollister, Tres Pinos (San Benito County), King City (Monterey County), Templeton, Atascadero, Santa Margarita and San Luis Obispo (San Luis Obispo County), Las Cruces and Santa Barbara (Santa Barbara County), and numerous places from Santa Barbara through Ventura County. Near Ventura we found anophelines breeding in great numbers within fifty feet of the ocean.



Few mosquitoes were found along the coast road in Los Angeles County, and no anophelines were encountered until we reached Santa Ana in Orange County, where anophelines were again collected in numbers within three to five miles of that community. This species continued to be present in abundance through the rest of Orange County to San Juan, thence in San Diego County from the northern boundary all the way to the Mexican line. It is of interest to note that with very few exceptions the anophelines collected along the coast belonged to that species which we believe to be a weak or ineffective carrier of malaria, namely *Anopheles pseudopunctipennis*.

#### Good Conditions at Camp Kearny.

From July 23 to July 27 the work centered about the military camps in and around San Diego. No mosquitoes were found breeding on the cantonment site at Linda Vista, several favorable breeding places having been previously oiled. However, we found anophelines breeding beside the road near San Diego Mission and many adults in that vicinity. On Point Loma, near the Country Club, we found a dammed-up pond in which unbelievable numbers of anopheline larvæ were found and in that vicinity also numerous salt marsh mosquitoes which were very troublesome. In Balboa Park, where both infantry and a naval training station were located at the time, numerous anophelines were found breeding in certain ornamental ponds, and culicines in catch basins. Flies were unnecessarily abundant in the vicinity of the wild animal cages, where animal offal from a slaughterhouse was fairly alive with maggots. At Imperial Beach, where both infantry and cavalry were stationed, the latrines were inadequate and in poor condition. A flushing system carried the excreta to a poorly-built temporary box intended to be a septic tank, which had burst its walls and created a nuisance in which vast numbers of mosquitoes were breeding. Though many horses were present, the number of flies was not great. North Island, seat of the aviation station, was found to be in good condition except for a few blow flies infesting food coolers and the fact that the men were allowed to swim near the sewer outlets. In addition other smaller military camps were visited.

On July 27 the party started on its return trip northward, collecting anophelines south of Bernardo (*Anopheles quadrimaculatus*) and at Escondido, Fallbrook and over the county line into Riverside County, near Elsinore. Owing to heavy rains no further collections were possible in Riverside County. Proceeding from Riverside anophelines were again encountered near Ontario in San Bernardino County, and near Pomona and Glendora in Los Angeles County. No anophelines were encountered in our collections over the Tehachapi Mountains until near Bakersfield in Kern County. A verbal report of the investigations in and about San Diego was made to the Chief Sanitary Officer in San Francisco, August 3, after our return to Berkeley.

#### Work at Camp Fremont.

Four different trips were made to Menlo Park and Palo Alto for the purpose of investigating the mosquito problems at Camp Fremont. The first trip was made July 6 with Colonel Lynch, and three other trips were made during early August. Three species of anophelines



were found breeding on the camp site, namely, *Anopheles quadrimaculatus*, *Anopheles punctipennis*, and *Anopheles pseudopunctipennis*. A salt marsh mosquito (*Aedes curriei*-*Aedes quaylei*) was at times very troublesome.

The anophelines were found breeding in pools in the beds of or adjacent to San Francisquito Creek, Los Trances Creek, and Madera Creek. The salt marsh mosquitoes were found breeding in countless numbers in the marshes about two miles east and northeast of Menlo Park, within easy striking distance.

It so happens that a good portion of the camp site is situated within the limits of the Pulgas Mosquito Abatement District, which enabled the writer to secure the hearty cooperation of Mr. T. Murray, superintendent of the district. The entire district was traversed in company with the superintendent and directions were given for the abatement of many active breeding places. Much oiling was immediately done.

At this time our party also followed the boundaries of the proposed Palo Alto Mosquito Abatement District which would protect that portion of the camp site not covered by the Pulgas district.

From August 15 to October 1 many short trips lasting from three to seven days were made to central coast districts and the San Joaquin Valley. Anophelines were located in the vicinity of Crockett in Contra Costa County, Saratoga and Los Gatos in Santa Clara County, Santa Cruz and Watsonville in Santa Cruz County, vicinity of Castroville, Monterey and Salinas in Monterey County, vicinity of Gilroy (Santa Clara County), Volta and Los Banos in Merced County; vicinity of Newman, Modesto, Ceres and Turlock in Stanislaus County, near Tracy, Roberts Island and Stockton (San Joaquin County), Livingston, Atwater, and unusual numbers in Merced, Merced County, in the western outskirts of Fresno (Fresno County), and in the vicinity of Madera (Madera County).

During the early part of October an investigation was carried out relative to an extreme mosquito nuisance in the neighborhood of Long Beach, a number of serious complaints having been received from Terminal Island and Long Beach. This investigation traced the trouble to certain salt marsh areas on Terminal Island and in the vicinity of Wilmington. A detailed report was made with recommendations for control.

#### Cooperation in Bakersfield.

On November 7 Messrs. Freeborn and Woodworth were directed to assist in putting into operation the recently organized Mosquito Abatement District at Bakersfield. Although this district has been recently legally constituted, work was started in Bakersfield as early as 1910. The district is the largest in the state, comprising an area of forty-eight square miles. In addition to the Morris district of Bakersfield there have been formed four other districts during the present year, namely, the Los Molinos district, the Palo Alto (Matadero) district, the Fair Oaks district and the Southern Sonoma district in Sonoma County.

Since the approval of the Mosquito Abatement Districts Act on May 29, 1915, one or more districts have been organized in each of



the following counties, namely: San Mateo, Marin, Santa Clara, Sonoma, Tehama, Sacramento and Kern. Plans for the organization of districts in three other counties are already under way. The success with which those districts already in operation have met proves the wisdom of this method of procedure.

An important weakness which the writer wishes to point out after a careful study of the situation is the lack of uniformity and coordination in administration. While each district has its own specific problems which may require different treatment, there should be greater uniformity in the standards of attack and each superintendent must keep himself well informed relative to the progress in his field of endeavor. High standards of efficiency are necessary in the expenditure of public funds. No doubt much good would result in the adjustment of the Mosquito Abatement Districts Act so as to provide for an effective coordination of the respective districts.

### THE ALTERNATE USE OF THE INTRADERMAL AND SUBCUTANEOUS TUBERCULIN TEST IN THE HERDS CERTIFIED BY THE SAN FRANCISCO COUNTY MEDICAL MILK COMMISSION.

ADELAIDE BROWN, M.D., President San Francisco County Medical Society Milk Commission; chairman Public Health Committee of the California Woman's Committee of the Council of National and State Defense.

Since June, 1906, the subcutaneous test for tuberculosis has been made on all cows before being added to the herds, and semiannually on the herds.

After June, 1914, all additions to the herd were admitted under the subcutaneous test, but the alternate use of the intradermal and subcutaneous was advised by the veterinary department of the University of California, which does this work for us.

The following data will show the results of the tests over a period of eight years:

I.	Subcutaneous tuberculin test on herd 1910-14-----	4077	
	Eliminated -----	262	6.4%
	Intradermal and subcutaneous alternate 1914-1918-----	7792	
	Eliminated -----	418	5.36%
II.	Subcutaneous test on cows for purchase 1910-1914-----	511	
	Eliminated -----	92	18.0%
	Subcutaneous test on cows for purchase 1914-1918-----	391	
	Eliminated -----	39	9.9%
III.	Subcutaneous test at semiannual tests 1910-1914-----	4566	
	Eliminated -----	170	3.7%
	Subcutaneous and intradermal alternate 1914-1918-----	7401	
	Eliminated -----	379	5.1%
*IV.	Intradermal tests <i>only</i> at semiannual tests 1914-1918—		
	Cows examined -----	1657	
	Reactions -----	79	4.7%

\*Incomplete, as reports fail to indicate which test was used several times.



Certain points of interest come out in a study of these data.

I. A smaller percentage of elimination under the joint test, though nearly twice as many animals were tested.

II. Chart 2 shows a more careful and critical study of stock before using test. The commission allows no cows from a bunch testing over 10 per cent reactions to be added to the herd. The 18 per cent reactors in 511 cows tested shows the prevalence of tuberculosis even in selected cattle and the reduction of reactors to 9.9 per cent in the second group proves care in selection.

III. Chart 3 shows an increased detection of tuberculosis under the alternating tests from 3.7 to 5.1 per cent.

IV. Chart 4—The intradermal alone detected 4.7 per cent reactors.

These statistics have been compiled because of the objection on the part of certain dairymen to the intradermal test which is the test required by our new California milk law.

This compilation brings out two points: that 1 per cent to 1.4 per cent of reactions are discovered by it, and that *careful* testing only can eliminate tuberculosis from the herd.

Our producers feel that the use we recommend of the alternating tests has been of great service and in several doubtful cases the ophthalmic test has been resorted to.

Our experience is that the intradermal is less expensive, takes less time, and at no time have we found any very markedly increased percentage of reactors under its use.

Our aim is to keep our herds free of tuberculosis, and after eleven years we have yet to see a semiannual test fail to show up at least 1 per cent of reactors.

Any addition to our security was welcomed by us,—as our ideal is a disease-free herd, and the more searching intradermal test evidently eliminates some animals that the subcutaneous does not uncover.



## A CALIFORNIA ASSOCIATION OF DAIRY AND MILK INSPECTORS.

In conjunction with the convention of the League of California Municipalities at Santa Rosa, a meeting of dairy and milk inspectors was held on September 25 and 26. At this meeting were representatives of the various state departments concerned in dairy and milk inspection, inspectors from most of the larger cities of the state and others interested in good milk. Papers were read on subjects of interest to inspectors and in most cases a lively discussion followed.

The meeting was called for the purpose of forming an association of the dairy and milk inspectors of the state. A constitution was adopted and officers for the ensuing year were elected. Dr. Maynard Rosenberger, city veterinarian, Los Angeles, was chosen president; Dr. J. A. Woodside, chief inspector, San Diego, vice president; Mr. Hugh Cameron, State Dairy Bureau Inspector, Orland, second vice president, and Dr. F. H. McNair, chief inspector, Berkeley, secretary-treasurer.

Provision is made for active and associate membership. Active members are persons officially engaged in dairy and milk inspection, including the executive officers of municipal and state departments. Associate members include persons who are interested in the improvement of dairy conditions.

The object of the association, as set out in the constitution, "shall be to develop an efficient and uniform inspection of dairy farms, milk establishments, milk and milk products, and to place the inspection of the same in the hands of persons who have a thorough knowledge of the industry."

There are in the state many independent inspection authorities. The larger cities have their force of field and laboratory men and the smaller cities have their single inspector or their health officer who combines this work with other duties. Some counties have an inspection service and in the state government itself are several departments concerned with the enforcement of dairy laws. These departments are the State Veterinarian's office, the State Dairy Bureau and the State Board of Health. All told there are about 125 men engaged in this work.

The work of these men is important to the dairy industry and to the state. It is demanded of them to enforce the dairy laws, to see that dairy cattle are healthy, that dairies and factories of dairy products are sanitary and that milk and dairy products are pure. They are expected to be able to advise the dairyman on cattle diseases, on dairy buildings, on many phases of his business and to advise the manufacturer on his problems. On the other hand, many of them have had but little support from superior authorities or from other branches of the government; they have had no publication devoted primarily to their needs, and they have had no organization through which to advance their interests.

It is hoped this organization may be the means of securing desirable uniformity of ideas, that it may provide an opportunity for the inspector to express his views on the many problems confronting him, for benefiting by the experience of others, and for keeping his education abreast of the times.



## OCTOBER REPORT OF PLAGUE SUPPRESSIVE MEASURES.

W. C. BILLINGS, Surgeon, United States Public Health Service, in charge Joint Federal and State Plague Suppressive Measures.

During the month of October, 1917, the usual routine squirrel eradication measures have been continued in the bay counties. The intensive work in the extra cantonment zone surrounding Camp Fremont has been drawing to a close, the greater part of the work during the month consisting of clean-up work which embodies reinspection and renewal treatment of such arrears as are found to present squirrel infestation after the ground has been gone over the first time. Carbon bisulphide has been largely used during this month's work because it permits of more direct and localized application and because of its greater efficiency.

On October 27, 1917, the service was represented at a meeting called by the Committee on Zoological Investigations, working under the State Council of Defense, held in Berkeley, at which were present representatives from various departments, all interested in the destruction of the ground squirrel. Plans were here outlined for coordination and cooperation in this work and it is expected that the end result desired will be furthered by the discussions of this conference.

Below is appended a tabulated statement of the work during the month:

Number of inspections and reinspections of lands-----	972
Number of acres inspected and reinspected-----	390,624
Number of acres treated with poisoned grain-----	139,568
Number of acres treated with waste ball method-----	3,795
Number of holes treated -----	18,040

## Work of Extra Cantonment Zone.

Number of squirrels found dead-----	30
Number of acres treated with kilmol-----	397
Number of acres treated with bisulphide-----	1,151
Number of acres treated with poisoned grain-----	17,450
Number of holes treated -----	20,296
Number of acres reinspected -----	1,015
Number of gallons of kilmol used-----	42 $\frac{1}{2}$
Number of gallons of carbon bisulphide used-----	113 $\frac{3}{4}$
Number of pounds of poisoned grain used-----	5,880



## NOVEMBER MEETING OF THE STATE BOARD OF HEALTH.

The regular monthly meeting of the State Board of Health was held in Sacramento on November 3, 1917, and was attended by Dr. George E. Ebricht, president, and Doctors Fred F. Gundrum, Edward F. Glaser, Adelaide Brown, Robert A. Peers, and Wilbur A. Sawyer.

On the request of Prof. C. A. Kofoed, Consulting Biologist, increased funds were allowed for the expenses of the Division of Biology in the eradication of hookworm from the mines and in other lines of work.

The board instructed the secretary to communicate with the mayor of San Francisco that the antivivisection ordinance pending before the board of supervisors would be in conflict with the work of the State Board of Health in protecting the health of the public.

By resolution of the board Dr. Wilfred H. Kellogg, Director of the Bureau of Communicable Diseases, was authorized to accept the position of Director of the Red Cross Laboratory Car, which position carries no salary, on condition that his duties will not call him outside the state.

One nurse was granted a certificate as a registered nurse through reciprocity.

Owing to the large numbers of nurses applying for registration, and in response to requests from training schools for nurses, the board decided that examinations of nurses for registration should be held three times a year—in February, June, and October—instead of twice a year, as heretofore.

County boards of plumbers were appointed, each consisting of a physician, a master plumber, and a journeyman plumber, as required by the new state law for the registration of plumbers.

On the recommendation of the Director of the Bureau of Sanitary Engineering, four temporary permits were granted for the operation of swimming pools. Permits were granted to Redwood City to dispose of the sewage of part of the city and of the Christofferson Aircraft Manufacturing Company into Steinberger Creek, to the city of Long Beach to dispose of the effluent of the Reinsch-Wurl screen into the Pacific Ocean, and to the city of Gustine to dispose of sewage on land.

A permit was granted to the San Fernando Mission Land Company to supply water to the city of San Fernando from wells.

The attorney of the board, Mr. Kemper B. Campbell, reported that the case brought by Cozak against Inspector Oakley of the Bureau of Foods and Drugs had been dismissed on the request of the attorney for Cozak.

Hearings were held in the food and drug cases set for this day, and many cases were referred to district attorneys for prosecution.

W. A. SAWYER,  
Secretary.



## REPORT OF THE BUREAU OF ADMINISTRATION FOR OCTOBER, 1917.

W. A. SAWYER, M.D., Director.

### ACTIVITIES OF THE STATE DISTRICT HEALTH OFFICERS.

#### North Coast District.

ALLEN F. GILLIHAN, M.D., State District Health Officer, Santa Rosa.

Doctor Gillihan, during the month of October, made a trip that covered almost the entire length and breadth of his district. He journeyed almost to the state line on the north, and penetrated over rough roads many of the important, though remote, cities of the district. Doctor Gillihan gave lectures in many of the places visited. He visited schools, county and city offices, giving a large amount of practical advice for the correction of insanitary conditions. Among the places visited are Ukiah, Point Arena, Greenwood, Mendocino City, Fort Bragg, Kenny, Eureka, Crescent City, Smith River, Requa, Arcata, Fortuna, Weaverville, Trinity Center, Carville, Lewiston, Ferndale, Willits and Philo.

#### Northern District.

HAROLD F. GRAY, Gr.P.H., State District Health Officer, Chico.

Mr. Gray, during October, visited the extreme northern part of his district, traveling as far north as Sisson. He also made a trip through the mountains to Lassen County, going to Westwood and Susanville, stopping at many places en route. Mr. Gray accomplished effective work in the control of venereal diseases in Marysville and Redding, and he did considerable work in stimulating birth registration and sanitary inspections. Among the places visited during the month are Live Oak, Marysville, Rackerby, Franklin, Challenge, Downieville, Sattley, Sierraville, Portola, Quincy, Greenville, Westwood, Susanville, Chester, Redding, Dunsmuir, Sisson, Shasta Springs, Castle Rock, Sweetbrier, Anderson, Red Bluff, Gerber, Whiskeytown, Old Shasta, Keswick, Kennett, Yuba City and Oroville.

#### Central Coast District.

R. N. HOYT, State District Health Officer, San Jose.

Much of Mr. Hoyt's time was spent at Camp Kearny and vicinity and at Monterey and the Monterey Presidio. Many problems in general sanitation and in venereal disease control were handled at these two places. The milk problem in Monterey also received considerable attention. Many problems relating to general sanitation were solved in San Jose and vicinity. Cooperative work was done in regard to the Matadero Mosquito Abatement District. An outbreak of scarlet fever in Alameda was carefully investigated during the early part of the month. Various canneries throughout the district were inspected and recommendations made for sanitary improvements. Among the places visited during the month were Berkeley, San Jose, Monterey, San Francisco, Menlo Park, San Leandro, Alameda and Palo Alto.

#### Central District.

RALPH W. NAUSS, M.D., State District Health Officer, Fresno.

A considerable portion of Doctor Nauss' time was spent in the investigation of hookworm in the Mother Lode district of Amador County. An inspection trip through the central San Joaquin Valley was made and various routine matters were taken up with the health officers of the cities visited. Typhoid fever in Kings County was investigated. Advice relative to the correction of many insanitary conditions was given. Among the places visited during the month were Berkeley, San Francisco, Sacramento, Placerville, Plymouth, Sutter Creek, Amador City, Jackson, Drytown, Fresno, Madera, Merced, Stockton, Ducor, Hanford and Kingsburg.



**South Coast District.**

EDWIN D. WARD, M.D., State District Health Officer, 210 Union League Building, Los Angeles.

The health officer of the South Coast District during October investigated typhoid fever in San Diego County, and also investigated an outbreak of meningitis at Camp Kearney. He also made an investigation of typhoid fever at Hollywood and vicinity. In addition, many problems relating to general sanitation were taken up with local health officers and advice relative to correcting insanitary conditions was given. The following towns were visited: Franklin Canyon, Redondo, Hollywood, Venice, San Diego, East San Diego, La Mesa, Lakeside, El Cajon, Coronado and Chula Vista.

**Southern District.**

EDWARD A. INGHAM, State District Health Officer, Riverside.

Mr. Ingham, in his work during October, met problems relating to infant welfare, typhoid fever control, supervision of food-producing establishments, water supplies and sewage disposal, venereal disease control, school inspection and many other problems. His work took him into the following cities: Riverside, San Bernardino, Colton, Ontario and Chino.

**MORBIDITY REPORTS.**

GUY P. JONES, Morbidity Statistician.

**Anthrax.**

Seven cases of anthrax were reported during the month. They occurred as follows: Butte County 1, Kern County 1, Los Angeles City 2, and Stockton 3.

**Cerebrospinal Meningitis (Epidemic).**

Six cases of cerebrospinal meningitis were reported as follows: San Diego County 3, San Francisco 1, Solano County 1, and Alameda County 1.

**Smallpox.**

There were 16 cases reported during October. Eleven of these occurred in Kern County, 2 in Fresno County, 2 in Nevada County and 1 in Nevada City.

**Poliomyelitis.**

Nine cases were reported during October, 1917, as against 21 cases reported during October of 1916. The cases reported last month occurred as follows: Berkeley 1, Oakland 1, Los Angeles County 1, Azusa 1, Los Angeles City 3, Pasadena 1, and Marysville 1.

**Typhoid Fever.**

One hundred and ninety-eight cases of typhoid fever were reported during October. These cases were reported from 31 counties of the state. Minor outbreaks occurred in San Francisco, Los Angeles, Stockton and Imperial County.

**Malaria.**

One hundred and forty-one cases of malaria were reported during the month. These were widely scattered throughout the interior valleys of the state.

**Leprosy.**

Four cases of leprosy were reported during October. One case occurred at Oakland, 2 in San Francisco, and 1 in Oxnard, Ventura County.



**Pneumonia.**

One hundred and seventy-six cases of pneumonia were reported during October, 1917, as against 96 cases reported during the same month of 1916.

**Syphilis and Gonococcus Infection.**

Two hundred and ninety-eight cases of gonococcus infection were reported during October, 1917, while but 41 cases of this disease were reported during October, 1916. One hundred and seventy cases of syphilis were reported during October, 1917, as against 62 such cases during October, 1916.

**Diphtheria.**

Two hundred and ninety-eight cases of diphtheria were reported during October, a considerable increase in the number reported during September, which was 112. One hundred and forty-eight out of the 298 cases reported occurred in Oakland, San Francisco and Los Angeles, while the remainder were widely scattered throughout the state.

**Scarlet Fever, Measles and Mumps.**

Three hundred and ten cases of measles and 386 cases of scarlet fever were reported during October, which is about the same number as were reported during September. Five hundred and seventy-eight cases of mumps were reported, which is a considerable increase in the number reported during September, when there were but 341 cases. During October, 1916, 235 cases of mumps were reported.

**Morbidity for October, 1917, by Weeks.**

	Weeks ending—					Total Oct., 1917	Total Oct., 1916
	Oct. 6	Oct. 13	Oct. 20	Oct. 27	Nov. 3		
Cerebrospinal meningitis		6				6	3
Chickenpox	48	33	73	56	68	278	161
Diphtheria	41	47	51	83	76	298	159
Erysipelas	10	3	6	6	4	29	16
Gonorrhea	27	56	66	65	84	298	41
Malaria	35	29	27	25	25	141	109
Measles	42	67	78	67	56	310	196
Mumps	68	136	114	146	114	578	235
Pneumonia	40	33	28	41	34	176	96
Poliomyelitis		4	2	2	1	9	21
Scarlet fever	58	79	69	78	102	386	529
Smallpox	2	2	4		8	16	6
Tuberculosis	160	85	117	205	133	700	540
Typhoid fever	59	32	41	36	30	198	85
Whooping cough	69	48	63	65	77	322	72
Syphilis	32	23	31	32	52	170	62
Anthrax	1		4	1	2	7	2
Beri-beri							1
Dysentery	3	3	4	1	2	13	2
German measles	1	30	9	12	8	60	2
Tetanus	1	1	1		2	5	
Trachoma	6		4	2	2	14	9
Typhus fever							
Leprosy	1	1		2		4	
Pellagra	1			1		2	
Ophthalmia neonatorum							2
Totals	705	718	792	926	879	4,020	2,352



## SANITARY INSPECTIONS.

EDWARD T. ROSS, Sanitary Inspector.

Since the first of September, most of the time of the State Sanitary Inspector has been taken up with State Board of Health exhibits. Most of October was devoted to such an exhibit at the Land Show, held in San Francisco from October 13 to 28. This exhibit was given the blue ribbon, and attracted a great deal of attention. Nearly all of the bureaus of the board were represented. Several thousand pieces of literature were distributed and a large amount of educational work was accomplished.

During the remaining days of the month, the sanitary inspector made some inspections of summer resorts in the north coast district with Dr. Allen F. Gillihan, State District Health Officer.

REPORT OF THE BUREAU OF COMMUNICABLE DISEASES  
FOR OCTOBER, 1917.

W. H. KELLOGG, M.D., Director.

Physicians throughout the state are invited to make more general use of the facilities for aid in diagnosis afforded by the Bureau of Communicable Diseases and its branches in Sacramento, Fresno, and Los Angeles. In many of the towns of the state, distributing depots for the diagnostic outfits are established in drug stores, and physicians are requested, if unable to find the mailing outfits in their towns, to notify the bureau, giving the name of a druggist who will be willing to act as representative in this matter.

The laboratory makes examinations for diphtheria, does the Widal blood test for typhoid fever, the Wassermann test for syphilis, and examines smears for gonococci and the malarial parasite. Physicians are especially requested to send to the central laboratory at Berkeley, specimens of stools from convalescent cases of typhoid fever in order that it may be known when the case is free from the infection and may, therefore, discontinue the preventive measures, such as disinfection of excreta, etc.

## Division of Biological Examinations.

*Summary of Examinations Made in the California State Hygienic Laboratory During the Month of October, 1917.*

Condition suspected	Positive	Negative.	In- conclusive	Total
Main Laboratory at Berkeley—				
Anthrax	19	28		47
Coccidiosis (rabbit)	1			1
Diphtheria (diagnosis)	18	26	6	50
Diphtheria (release)	17	18		35
Gonococcus infection	9	90	2	101
Malaria		5		5
Rabies	1	5	1	7
Syphilis (Wasserman test)	31	164	14	209
Tuberculosis (sputum examinations)	7	30		37
Typhoid (Widal test)	4	16		20
Typhoid (excreta)		2		2
Typhoid (blood culture)		2		2
Paratyphoid		1		1
Tubercular meningitis		1		1
				518
Northern Branch at Sacramento—				
Diphtheria (diagnosis)	5	22		27
Diphtheria (release)	2	3		5
Malaria		8		8
Tuberculosis (sputum examinations)	10	25		35
Typhoid (Widal test)	11	17	3	31
				106



## Division of Biological Examinations—Continued.

*Summary of Examinations Made in the California State Hygienic Laboratory During the Month of October, 1917.*

Condition suspected	Positive	Negative	Inconclusive	Total
<b>Central Branch at Fresno—</b>				
Diphtheria (diagnosis) -----	12	28	2	42
Diphtheria (release) -----	7	1		8
Gonococcus infection -----		2		2
Malaria -----		2		2
Tuberculosis (sputum examinations) -----	1	9		10
Typhoid (Widal test) -----		14		14
				78
<b>Southern Branch at Los Angeles—</b>				
Anthrax -----	1	4		5
Diphtheria (diagnosis) -----	13	45	3	61
Diphtheria (release) -----	38	36	3	77
Diphtheria (school investigations)* -----	53	414	†28	495
Gonococcus infection -----	2	1		3
Rabies -----			1	1
Tuberculosis (sputum examinations) -----	9	15		24
Typhoid (Widal test) -----	10	38	8	56
Typhoid (excreta) -----		9	†3	12
Paratyphoid -----		2		2
Miscellaneous -----				3
				739
<b>Total number of examinations -----</b>				<b>1,441</b>

\*Cultures taken from school children at Calabasas, 42; Venice, 173; San Dimas, 136; Garvey School, Los Angeles, 28; Mount Olive School, Los Angeles, 96; and from students at the Nazarene University, Pasadena, 20.

†Inconclusive 17, no growth 11.

‡Inconclusive 1, incomplete 2.

## Division of Epidemiological Investigations.

*Epidemiological Investigations and Other Special Investigations During October, 1917.*

## Main Laboratory at Berkeley—

An investigation of a case of human anthrax at Suisun.

An investigation of a diphtheria outbreak at Calabasas.

Institution of carrier work in meningitis at Los Angeles.

Total number of investigations ----- 3

## Division of Preventive Therapeutics.

*Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory During the Month of October, 1917.*

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley -----	0	1
Northern Branch at Sacramento -----	0	0
Central Branch at Fresno -----	0	0
Southern Branch at Los Angeles -----	0	0
Laboratory of Sacramento Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Diego City Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	0	0
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist -----	0	0
<b>Totals -----</b>	<b>0</b>	<b>1</b>



**Distribution of Laboratory Products.***Vaccine for the Prevention of Typhoid Fever Issued by the State Hygienic Laboratory During the Month of October, 1917.*

Number of physicians to whom vaccine was sent----- 10  
 Number of complete treatments sent----- 208

*Ophthalmia Neonatorum Prophylactic Outfits Distributed During the Month of October, 1917.*

Number of outfits, containing two ampoules each, issued-----1,012

**Public Health Instruction.***Participation in Instruction in Public Health During October, 1917.*

## Main Laboratory at Berkeley—

Bacteriological instruction outfits sent out----- 3  
 Bacteriological instruction outfits in use----- 20  
 Lectures by the Director----- 3

**BIOLOGICAL DIVISION.**

CHARLES A. KOFOID, Ph.D., Sc.D., Consulting Biologist.

During the past month three experimental problems have been taken up in the laboratory. The first was the detection of hookworm larvæ in the soil from a sump of an infected mine. A sample of earth from the bottom of the sump was placed under culture in nine different containers, and larvæ were recovered from the earth in seven of the nine samples, as many as eight or ten larvæ being recovered from a single sample. The larvæ leave the sample in water passing through the earth and filter paper surrounding it.

The second experiment was concerned with the effect of centrifuging upon the viability of the hookworm eggs. Infected samples were divided into two parts, one-half of which was cultured without centrifuging, and the other half centrifuged for a period of fifteen seconds at the rate of 1,600 revolutions per minute. The difference in viability of the two was almost negligible. It seems, therefore, that light centrifuging to this degree is not destructive to hookworm eggs.

The third problem was to determine the optimum time for investigation of cultures. Ten cultures examined daily yielded up larvæ continuously from one to three weeks. The largest number of larvæ, however, leave the cultures during the third and fourth days after they have been placed in the incubator. This is the sixth or seventh day after collection of the sample.

*Summary of Examinations Made in the Biological Laboratory of the State Board of Health During the Month of October, 1917.*

Condition suspected	Positive	Negative	Inconclusive	Total
Intestinal worms—				
Hookworm -----	23	114	0	137
Hookworm larvæ in mine earth-----	7	2	0	9
Trichuris -----	5	132	0	137
Strongyloides -----	1	0	0	1
Intestinal protozoa—				
Giardia -----	0	5	0	5
Trichomonas -----	0	5	0	5
Entamoeba histolytica -----	0	5	0	5



## REPORT OF TUBERCULOSIS BUREAU FOR NOVEMBER, 1917.

E. L. M. TATE-THOMPSON, Director.

The Southwestern Tuberculosis Conference, attended by delegates from Arizona, California, Colorado, Nevada, New Mexico, Oklahoma and Texas, met in annual session at the Grand Canyon last month. Fifty-six delegates, representing the above states, discussed the tuberculosis problems of the Southwest.

It was a war meeting that sounded not only a preparedness keynote for the present, but one looking towards peace. The medical session, a symposium on the diagnosis of tuberculosis in war times, brought out many interesting facts. One thing is certain, a man serving his country now stands less chance of being thrown on the scrap heap after this war than he did after previous wars.

An interesting phase brought out was, if the X-ray is used in the diagnosis of tuberculosis and an evidence of tuberculosis is shown, even though the man may be a "cure," will the government refuse his insurance or pension on the proof shown on the plate? Doctor Peers contended that the X-ray in diagnosis defeated its purpose, if it was used in that way.

Our soldiers are billeted in French villages. They will meet thousands of soldiers and civilians infected with tuberculosis, and as William Allen White, writing on the situation in France, comments, that if the world is to be made safe for democracy it is necessary first to make France unsafe for tuberculosis.

### Lack of Available Machinery.

The keynote of the meeting, however, was the lack of machinery available in the Southwest to meet the present conditions.

Lack of clinics, visiting nurses and beds maintained by counties or municipalities makes it necessary not only to provide care for the white people infected with tuberculosis, but for the Negro, Mexican and Indian population.

Housing conditions in the larger cities were mentioned as a distinct menace to public health.

### Men Excluded in the Draft.

Already migration is beginning as a result of the draft. Many of the men excluded in California have written that they are going to Arizona for the winter. This, coupled with the fact that there is no way of caring for them in the Southwest, if they are without funds, makes it necessary for publicity to be given in order to save them later from joining the ranks of another army, only too well known in the Southwest.

We have today about fifteen hundred men rejected in the draft on account of tuberculosis in California.

In Chicago, in one of the best residential districts, 98 men out of 1,525 were rejected for the same reason. These rejections were made after four thorough examinations.

In North Carolina, the rejections numbered 5 per cent, and in New York, where X-ray examinations were made of men in one of the national guard regiments, not raw recruits, 3.6 per cent showed tuberculosis sufficient enough to disqualify them from service.

It would seem to be a paramount necessity that a sufficient number of beds be provided—not next year, but now, for any man needing special care.

We are glad that in this state we found those fifteen hundred men now, rather than have them invalided home in the last stages of tuberculosis. Perhaps the most gratifying part of the entire program has been the response to our letters. It is difficult in any educational campaign to know how far one progresses with it, but when the men from the oil fields and many other industries, write us—"I want to arrange for treatment before it is too late"—it gives us hope that, at least, with our greatly increased bed capacity, our thirty tuberculosis visiting nurses, ten clinics and nineteen active tuberculosis societies, we can keep step



with the Captain of the Men of Death. Having outdistanced him last year, we may not face an abnormal condition when peace comes, but we can only do it by eternal vigilance.

The penny lunch in the schools may become a very vital part of our program.

The Christmas Seal Sale is providing the munitions for all of this work. Ten millions have been distributed in California—it's your "Liberty Bond" against tuberculosis.

#### Hospitals Inspected.

Los Angeles  
Alameda

San Francisco  
Fresno

## REPORT OF THE BUREAU OF VENEREAL DISEASES FOR OCTOBER, 1917.

HARRY G. IRVINE, M.D., Director.

#### Progress in San Francisco.

The city of San Francisco began its present plan for venereal disease control in accordance with the program of the State Board of Health and the United States Army and Navy in advance of the establishment of the Bureau of Venereal Diseases. Since the formation of the bureau the City Board of Health has cooperated with the bureau in working out many details in the methods of handling venereal disease control in municipalities. Dr. W. C. Hassler, health officer, has done splendid work in organizing this large undertaking in San Francisco. Dr. R. G. Broderick, superintendent of the San Francisco Hospital, has arranged for excellent hospital quarters for patients under official isolation and treatment for venereal diseases. The work has been so successful that the ward originally set aside for this purpose is no longer adequate and plans have been laid by the Board of Health for doubling the number of available beds.

The work at the examining clinic and the follow-up supervision of patients discharged from the hospital is being conducted by Dr. J. A. Sperry, a specialist in gynecology and a member of the faculty of the Stanford University Medical School. Dr. Sperry's position on the staff of the San Francisco Board of Health was created especially for this work. The examining room and records are in the Hall of Justice in order to be readily accessible to the many patients referred by the courts for examination. The regulations governing this work were briefly outlined in last month's report of the bureau printed on page 227 of the November issue of the Bulletin. This clinic is used also for the examination of women who have been discharged from the hospital, but who are still in need of follow-up treatment. Such cases are at large under agreement not to practice prostitution and to remain under treatment until finally discharged. Social service work is carried on by various agencies to secure employment for such persons and, when necessary, to give them a place of residence while getting a start. This social service work makes it possible for these cases to abide by their agreement, and in many instances it will result in permanent legitimate employment.

Fortunately for the venereal disease control work, the San Francisco Health Department has the cooperation of an excellent police "morals squad" under Lieutenant Goff, which is actively repressing prostitution and bringing law breakers before the courts. The courts are cooperating by making it possible for the health department to examine all persons arrested for prostitution or allied offenses. In response to the requests of the State Military Welfare Commission, the State Board of Health, the City Board of Health, and the War Department Commission on Training Camp activities, the police judges have agreed on a policy of vigorous repression through imposing jail sentences on prostitutes, except in cases in which reference to social agencies, which will furnish occupation and supervision, seems the more effective plan. The Social Service Director of the Bureau, Miss Marian Lynne, is organizing this important work of rehabilitation. Special mention is made of the cooperation of Judge Morris Oppenheim,



who will preside over the Women's Court during November. He has announced a policy of stern repression of prostitution, coupled with hearty cooperation in measures for the rehabilitation of prostitutes.

#### **Los Angeles.**

The City Health Department of Los Angeles has recommended an excellent plan for an isolation hospital for venereal disease cases, for the examination and treatment of male and female prisoners for venereal diseases, for the extension of the free night clinic for venereal diseases maintained by the Health Department, and for free Wassermann examinations for all cases of syphilis in the city.

#### **San Diego.**

The city and the county of San Diego have combined to build and maintain an isolation hospital for cases of venereal diseases, as the available space at the County Hospital has proved inadequate. The proximity of Camp Kearney and other military and naval posts has given the work added importance. San Diego was the first city in California to form a definite program for venereal disease control after the receipt of the letter from Governor Stephens and the resolutions of the State Board of Health on the subject. The city and county are perfecting and enlarging their plan in cooperation with the Bureau of Venereal Diseases and the local military and naval authorities.

#### **District Health Officers Cooperate.**

In the Northern District, State Health Officer Gray, during the month, has made an intensive study of venereal diseases in his district. His reports relative to two of the larger cities showed that open segregated districts were in operation. Acting upon these reports, the director of the bureau took up the matter with local physicians, mayors, and district attorneys of the cities and counties concerned. Following this action, the segregated districts in these cities have been closed. If local health officers will consistently supply the bureau with information of this sort, more action in the repression of venereal disease and prostitution will be obtained.

#### **Efficiency of Reporting Sources.**

Dr. Watters, sanitarian in the bureau, is listing all reports where specific information is given regarding the reported sources of venereal disease as submitted by the representatives of the Army and Navy stationed in California. It is desired to learn how efficient, from the standpoint of reducing venereal disease, this plan of reporting and controlling sources may be. Accordingly the San Francisco cases are followed into the Women's Court, in order to learn how many are being apprehended and placed under treatment. The investigation has already shown that the reporting of sources by naval and military authorities is a valuable part of the program for venereal disease control.

#### **Dispensaries Accredited Temporarily.**

During the month the College of Physicians and Surgeons, San Francisco, and the Oakland College of Medicine, Oakland, were placed upon the temporary accredited list, such accrediting to hold until January 1, 1918. This makes a total of eight dispensaries that have been temporarily accredited by the bureau so far.

#### **Publications.**

A pamphlet on the modern treatment of syphilis, designed especially for the use of physicians, hospitals, clinics and dispensaries, has been published and is ready for distribution. Another pamphlet of information on syphilis and gonorrhoea, intended primarily for distribution to patients suffering from these diseases, has been printed and will be sent to physicians and health officers on request.

#### **Investigation at Monterey.**

The director of the bureau, with Mr. Robert N. Hoyt, Health Officer for the Central Coast District, visited Monterey to investigate conditions relative to venereal disease control. The local authorities were consulted and instructed



relative to the enforcement of the laws for the repression of prostitution and the regulations of the State Board of Health for the prevention of venereal diseases. The bureau is particularly anxious to secure, in cooperation with the local authorities, efficient venereal disease prevention at Monterey on account of the presence of the troops at the Presidio of Monterey.

#### Distribution of Salvarsan or Analogues During September, 1917.

Number of doses of arseno-benzol sent to health officers and approved dispensaries -----	144
San Francisco Hospital -----	70
Juvenile Hospital, Los Angeles -----	25
Health Officer, San Diego -----	24
Stanford University -----	12
University of California -----	10
San Francisco Polyclinic -----	3
Total -----	144

#### Distribution of Salvarsan or Analogues During October, 1917.

Number of doses of arseno-benzol sent to health officers and approved dispensaries -----	99
Department of Health, San Diego -----	50
San Francisco Hospital -----	25
Stanford University -----	12
Department of Health, Los Angeles -----	5
College of Physicians and Surgeons, San Francisco, -----	3
San Francisco Polyclinic -----	3
Berkeley Dispensary -----	1
Total -----	99

#### Treatment Reports Received During September and October, 1917.

25 patients receiving 1 dose each -----	25 doses
6 patients receiving 2 doses each -----	12 doses
4 patients receiving 3 doses each -----	12 doses
3 patients receiving 4 doses each -----	12 doses
Total 38 patients receiving -----	61 doses

#### Occupation of Patients Receiving Salvarsan From the Bureau.

Prostitutes -----	19
Other occupations -----	12
No occupation -----	7
Total -----	38

Sex—Men, 10; women, 28.

#### Dispensaries and Hospitals Temporarily Accredited for Treatment of Venereal Disease.

Accredited to January 1, 1918 (reported last month) -----	6
Berkeley Dispensary, Berkeley.	
Los Angeles Juvenile Hospital, Los Angeles.	
San Francisco Hospital, San Francisco.	
San Francisco Polyclinic, San Francisco.	
Stanford University Clinic, San Francisco.	
University of California Hospital, San Francisco.	
Accredited to January 1, 1918 (since last report) -----	2
College of Physicians and Surgeons, San Francisco.	
Oakland College of Medicine, Oakland.	
Total -----	8



## REPORT OF THE BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

### California Physicians Faithfully Registering Births.

Correspondence with California physicians who had filed birth certificates somewhat late, so as to have been reported by local registrars for violations of the law, has brought replies showing the realization by them of their duty to each newborn babe, and of their faithful intentions and practice with respect to birth registration requirements. Some of the replies appear in the following extracts from letters of explanation:

"You will find my record to be one in the past of having been particular to live up to all laws. I served as health officer for ten years in the East, so appreciate promptness."

"I would like to call your attention to the fact that for thirteen years every birth that I have attended has been properly registered—however, not always within the thirty-six-hour period or the five-day period—but registered."

"This is my first error of this nature in some fifty births recorded within the last two and a half years, and I hope the *last*."

"If you investigate you will find a faithful record of all births I have attended since I can remember, a period of ten to fifteen years."

"The war has brought to my realization more than anything else could, the duty of the M.D. toward the newborn child. To this end I am collecting and have been mailing blank forms to all persons or families in which I have attended a confinement. In this way I feel I am correcting a grievous wrong done."

### Midwives Duly Obeying Birth Registration Law.

Explanations from midwives whose dilatoriness caused them to be reported for violations of the law include abject apologies for their neglect and positive assurances of strict obedience henceforth, as indicated by the following extracts from some answers:

"Mrs. ——— called on us (the local registrar's office) today and was much distressed because of the letter mailed from your office. She pleads ignorance on the subject of birth registration, and judging from the conversation we had with her, we are sure she will not again be delinquent."

"Will try my foremost best to send them in as soon as possible, which I hope this error will not occur again."

"I will have to apologize for negligence on my part, as I had taken sick before I have finished take care of party mentioned, but I beg to say that if this is let by I am positive to say that it will not occur again."

### Births, Deaths and Marriages for September.\*

*State, Totals and Annual Rates.* The following table shows for California as a whole, the birth, death and marriage totals for the current month and the year to date in comparison with corresponding figures for last year, as well as the annual rates per 1,000 population represented by the totals for the current month and the year to date. The rates are based on an estimated midyear population of 3,037,968 for California in 1917, the estimate having been made by the United States Census Bureau method with slight modifications.

\*NOTE.—The present report is for the month preceding but two. This order must be followed because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the next preceding month is completed.



*Birth, Death and Marriage Totals, with Annual Rate per 1,000 Population, for Current Month and Year to Date, for California: September.*

Month or period	Total		Annual rate per 1,000 population, 1917
	1917	1916	
September—			
Births -----	4,331	4,159	17.3
Deaths -----	3,076	2,881	12.3
Marriages -----	3,066	2,886	12.3
January to September—			
Births -----	37,720	37,259	16.6
Deaths -----	31,369	28,946	13.8
Marriages -----	26,368	22,388	11.6

The birth, death, and marriage totals for September, 1917, show an increase of 192, 195, and 180, respectively, over September of 1916.

Also the totals for the first nine months of 1917, January to September, inclusive, show a gain over the same period for last year of 501 for births, 2,423 for deaths, and 3,980 for marriages.

*Length of Residence.* The length of residence in California for the 3,076 decedents in September was as follows: Under 1 year, 126, or 4.1 per cent; 1 to 9 years, 494, or 16.1 per cent; 10 years and over, 1,352, or 43.9 per cent; life, 874, or 28.4 per cent; and unknown, 232, or 7.5 per cent.

For residents of the 70 cities of 2,500 population in 1910, there were 130 births and 159 deaths, which occurred in registration districts other than the city of residence.

*County Marriage Totals.* The counties showing the highest marriage totals for the month were as follows: Los Angeles, 686; San Francisco, 569; Alameda, 323; San Diego, 126; Sacramento, 115; Orange, 96; San Joaquin, 93; Santa Clara, 92; Fresno, 90; San Bernardino, 71; Riverside, 68; Sonoma, 48; and Kern, 47. The aggregate for San Francisco and other bay counties was 999, against 782 for Los Angeles and Orange counties together.

*County Birth and Death Totals.* Exclusive of stillbirths in both cases, the birth and death totals for the month were as follows for the leading counties, arranged in decreasing order of birth registration:

County	Births	Deaths	County	Births	Deaths
Los Angeles -----	1,071	731	Orange -----	103	45
San Francisco -----	664	571	San Bernardino -----	94	87
Alameda -----	434	292	Tulare -----	93	38
Fresno -----	190	89	Contra Costa -----	81	31
Sacramento -----	157	97	San Luis Obispo -----	72	19
San Diego -----	127	104	Sonoma -----	70	52
Santa Clara -----	124	131	Kern -----	67	40
San Joaquin -----	116	108	Riverside -----	57	28

*City Birth and Death Totals.* Birth and death totals, exclusive of stillbirths, are presented similarly for the principal California cities below:

City	Births	Deaths	City	Births	Deaths
Los Angeles -----	712	460	San Jose -----	50	31
San Francisco -----	664	571	Long Beach -----	45	47
Oakland -----	279	151	Pasadena -----	45	35
Sacramento -----	121	90	Alameda -----	38	34
San Diego -----	95	81	Bakersfield -----	30	21
Berkeley -----	75	38	Richmond -----	30	10
Stockton -----	71	72	Santa Ana -----	30	9
Fresno -----	67	22	Santa Barbara -----	26	13



*Causes of Death.* The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

*Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths for Current and Preceding Month for California: September.*

Cause of death	Deaths, September	Proportion per 1,000	
		September	August
All causes -----	3,076	1,000.0	1,000.0
Typhoid fever -----	22	7.2	9.5
Malarial fever -----	9	2.9	2.6
Measles -----			1.0
Scarlet fever -----			0.7
Whooping cough -----	14	4.6	7.5
Diphtheria and croup -----	17	5.5	3.0
Influenza -----	2	0.6	
Other epidemic diseases -----	16	5.2	3.9
Tuberculosis of lungs -----	299	97.2	113.9
Tuberculosis of other organs -----	41	13.3	19.4
Cancer -----	250	81.3	84.3
Other general diseases -----	128	41.6	45.9
Meningitis -----	16	5.2	7.2
Other diseases of nervous system -----	305	99.2	83.7
Diseases of circulatory system -----	484	157.3	178.5
Pneumonia and broncho-pneumonia -----	239	77.7	45.3
Other diseases of respiratory system -----	39	12.7	8.5
Diarrhea and enteritis, under 2 years -----	106	34.5	38.1
Diarrhea and enteritis, 2 years and over -----	39	12.7	15.1
Other diseases of digestive system -----	184	59.8	58.1
Bright's disease and nephritis -----	233	75.7	64.7
Childbirth -----	19	6.2	8.9
Diseases of early infancy -----	130	42.3	37.1
Suicide -----	59	19.2	25.3
Other violence -----	317	103.0	94.2
All other causes -----	108	35.1	43.6

In September there were 484 deaths, or 15.7 per cent of all, from diseases of the circulatory system; 340, or 11.0 per cent, from the various forms of tuberculosis; and 329, or 10.7 per cent, from diseases of the digestive system. The number of deaths from heart disease surpassed those from tuberculosis by only 44.

Other notable causes of deaths for the month were as follows: Diseases of the nervous system, 321; cancer, 250; Bright's disease and nephritis, 233; and epidemic diseases, 80.

The month of September makes the gratifying showing of no death from either measles or scarlet fever.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Typhoid fever		Diphtheria and croup		Whooping cough	
Alameda -----	2	Fresno -----	2	Humboldt -----	1
El Dorado -----	1	Los Angeles -----	6	Kern -----	1
Fresno -----	4	San Francisco -----	6	Los Angeles -----	3
Kern -----	1	San Joaquin -----	1	Riverside -----	3
Los Angeles -----	5	Santa Barbara -----	1	San Bernardino -----	1
Placer -----	1	Yolo -----	1	San Francisco -----	3
Riverside -----	1			Santa Clara -----	1
Sacramento -----	1			Santa Cruz -----	1
San Bernardino -----	2				
San Diego -----	1				
Shasta -----	1				
Sutter -----	1				
Tehama -----	1				



*Sex, Race and Nativity.* The proportion of the sexes among the 3,076 decedents in September was: Male, 1,879, or 61.1 per cent of all; and female, 1,198, or 38.9 per cent.

The race distribution of decedents was: White, 2,904, or 94.4 per cent; Chinese, 61; Japanese, 54; Negro, 41; and Indian, 16.

The 2,904 white decedents were classified by nativity as follows: California, 807, or 27.8 per cent; other states, 1,216, or 39.1 per cent; foreign countries, 881, or 30.3 per cent; and unknown, 81, or 2.8 per cent.

*Infant Mortality.* There were 335 deaths for children under 1 year, which were distributed by age in months as follows: Under 1 month, 152, or 45.4 per cent; 1 to 2 months, 44, or 13.1 per cent; 3 to 5 months, 70, or 20.9 per cent; 6 to 11 months, 69, or 20.6 per cent.

In certain cities and counties the deaths under 1 year were as follows: Los Angeles, 53; rest of Los Angeles County, 27; San Francisco, 43; Oakland, 22; rest of Alameda County, 13.

The 335 deaths under 1 year, in comparison with the 4,331 live births reported for the month, represent an infant mortality ratio of 77 per 1,000 births.

## REPORT OF THE BUREAU OF SANITARY ENGINEERING FOR OCTOBER, 1917.

C. G. GILLESPIE, C.E., Director.

### RUNNING WATER DOES NOT PURIFY ITSELF.

Wherever a case of stream pollution is discovered, and on the feeders of our best streams there are far too many, the invariable excuse is heard, "Doesn't running water purify itself?" So precise is the working knowledge of some that the exact distance of flow is known. Sixty feet seems to be the popular figure. So mischievous, in fact so disastrously murderous, is this belief that it can not too soon be completely rooted from the memory of man. No one seems to know who advanced the doctrine and most of its present-day apostles seem to have been born with this one bit of instinctive knowledge. It seems likely that it preceded the advent of bacteriology.

In the first place, "purification" is a vague expression and conveys too much of the idea of 100 per cent efficiency, for everyday use. Water and sewage will undergo a literal "self-improvement" but seldom a "purification." The improvement may be in turbidity appearance, in odor, in some one or more chemical attributes, or in biologic or bacteriological elements, or possibly in some other respect, depending upon the use to which the water is to be put or the viewpoint of the observer. The factors operative to cause a self-improvement may be and usually are entirely different for each measure.

Turbidity is usually mud in suspension. The coarser mud will settle out quickly, the fine mud takes a long time. Time is the main factor. Hence a reservoir, pond, or slow-flowing stream will show the greatest improvement.

Practically all odors come from the presence of decaying organic matter in the stream—weeds, trees, sewage, minute moss, etc.—and odors from organic material can not be noticed until the decay has so exhausted the freshness of the water that it becomes "stagnant," that is, devoid of oxygen. Improvement results immediately as the oxygen is restored. Running water, especially over rapids, hastens reabsorption of air by the water and the corresponding disappearance of odors and reappearance of freshness and sweetness. Water standing in shallow ponds or thin sheets will also take up air by absorption quite readily, but this same condition gives rise to further moss growth which may obscure the improvement. It is this improvement or "purification" in sweetness and freshness that the layman really has in mind when he speaks of "purification" by a running stream. Improvement in some one or more of the chemical constituents merely measures in a most refined way the extent of this freshening and sweetening action.

Moss is the principal biologic element. It grows best in warm, clear waters rich in organic matter and, as a rule, running water yields no particular improvement. Moss is to be observed in most clear streams in the summer season.



### Bacterial Contamination.

For all practical purposes, sewage is dangerous to health and makes a water contaminated by it dangerous only when some one or more persons producing the sewage are suffering from typhoid fever or some bowel disorder. It is not necessary for one to be confined to bed, however, or even perceptibly ill, in order that the sewage may contain typhoid germs. A considerable portion of typhoid recoveries still eject typhoid germs for years after apparent recovery. Therefore no sewage is positively safe. It may at any time contain typhoid germs. The typhoid germ is not native in water, however, and gradually perishes in it. Some of the destructive influences are: (1) Settlement along with the settling mud. (2) Osmosis, *i. e.*, absorption of the natural water salts by the protoplasmic cell structures. (3) Dilute food supply. (4) Predatory organisms. (5) Sunlight. Time is the essence of the destruction or improvement in all cases. Fully thirty days are necessary to effect full destruction. *It is farthest from the province of a running stream to hasten the destruction of typhoid germs.* Actual storage, as in a lake or pond, for thirty days or more, is effective, but running water never is. A typhoid germ could travel the full length of the Sacramento River three times before dying.

### SEWAGE DISPOSAL.

#### Applications for Permit Filed.

*Santa Barbara.* To discharge sewage effluent into the Pacific Ocean.  
*Redwood City.* To dispose of sewage into Steinberger Creek.

#### Permits Granted.

*Gustine.* Permit to discharge sewage onto waste land designated as owned by Miller & Lux, as per plans filed.

*Long Beach.* Permit to dispose of the effluent of the Reinsch-Wurl screen into the Pacific Ocean, on the following conditions:

1. Chlorination of the effluent shall be given when demanded by the State Board of Health.
2. No plant or beach nuisance shall be caused by the sewage.
3. No material modifications or additions shall be made in the works or means of sewage or sludge disposal without the approval of the State Board of Health.

*Redwood City.* Permit to dispose of the sewage of a portion of the city and the plant of the Christofferson Aircraft Manufacturing Company into Steinberger Creek, with the provisions that:

1. No objectionable nuisance will be created thereby.
2. No material alterations or additions will be made without the previous approval of the State Board of Health.

#### Plans Filed.

*Redwood City.* Plans for new outfall sewer to serve the Christofferson Aircraft Manufacturing Company plant and a portion of the town.

*Santa Barbara.* Sketch showing comparison of existing and proposed outfalls.

#### Investigations, Inspections, Reports and Conferences.

*Long Beach.* October 25. Investigation of sewage-screening plant as a basis for descriptive and operation report.

*Eldridge, State Home for the Feeble-Minded.* October 22. Sewage is treated in septic tanks followed by disinfection with hypochlorite of lime. At present the system is giving inferior results.

*Camp Fremont.* October 7. Trip to Camp Fremont to consider permitting the camp to employ pit latrines for a portion of the camp. Pit latrines were agreed to beyond one mile of the highway at Menlo Park.



*Truckee River.* October 17 to 21. Stream pollution studies continued, to determine feasibility of a sanitary cleanup of the river from Lake Tahoe to the Nevada-California state line. Among the sources of pollution discovered are:

1. A small but highly-polluted stream passing through the back yards of Tahoe City.
2. Several summer cottages along the river between Tahoe and Truckee.
3. Numerous privies in Truckee within a few feet of the water's edge.
4. Manure piles on the bank, sliding into the stream.
5. Entire sewage of Truckee Sanitary District.
6. Trout Creek, a small stream flowing through Truckee over which are a great many shacks and privies and into which some sewers empty.
7. Sewer from Southern Pacific Hotel and ticket office at Truckee.
8. Entire sewage of Hobart Mills emptied into Prosser Creek, four miles above the Truckee River and three miles above the dam which makes Prosser Creek a large ice pond.
9. Boca, Union Ice Company. Sewage from the hotel empties onto the river bank a few feet from the river.
10. Iceland. A large corral, farm shacks and privy are located directly on the river bank.
11. Floriston. The entire sewage of the Floriston Hotel.
12. Industrial waste of Floriston paper mills, including spent sulphite waste and an extremely large amount of wash water.
13. Farad. Sewage, slops and garbage of Farad Power House employees.

Engineering difficulties are encountered in nearly all these instances, as the lay of the ground makes it impossible to exclude the sewage from the river in most cases and freezing weather will handicap the operation of sewage treatment devices. However, it seems much can be accomplished and the bureau will recommend that the river be cleaned up as much as possible.

*Elk Grove.* October 24. Investigated plans advanced by the Da Roza Winery for relief of complaints on account of winery and distillery waste nuisance.

*Gustine.* October 25. Investigated sewerage and disposal with a view to recommending sewage disposal permit. Recent improvements provide additional sewers and a 3,500-foot outfall leading to waste land; no residences within half a mile. Plans approved.

*Hollister.* October 27. Investigation made on account of reported change in point of sewage disposal without having secured approval of the State Board of Health. At present, crude sewage is piped across San Benito River to a private farm along the sedimentary river bank and used to water corn, pumpkins and oats. The owner has a 25-year contract, expiring in 1922; found that no changes in disposal are possible until that date, unless nuisance occurs, which seems unlikely.

*Manor, Marin County, Arequipa Sanatorium,* October 22. Trip made to advise on sewage disposal. At present cesspools are used. These are overflowing and effluent flows down to side of main road. Plans and sketches of septic tank and subsurface irrigation have been sent.

*Cloverdale.* October 31. Sewer farm reinspected. Crops watered by sewage are cabbage and tomatoes, both of which are forbidden to be watered in accordance with the regulations of the State Board of Health, August 5, 1916: "Sewage or sewage polluted water shall not be used for irrigating vegetables, berries, low-growing fruits, or green corn intended for human consumption."

*Sacramento River.* October 9 to 18. An inspection trip was made along the upper Sacramento River from Sisson to Redding to determine the feasibility of a sanitary clean-up of the river. The following sources of pollution were found: Effluent from septic tank at Sisson, sewers from Shasta Springs Hotel and Shasta Retreat, private sewers from city and railroad shops at Dunsmuir, sewage from the following resorts: Castle Crag Hotel, Castle Rock Hotel, Hotel Castella, sewage from sawmill and hotel at Lamoine, sewage from two private sewers and numerous individual house sewers at Kennett, sewage from the Mammoth Copper Company houses, hospital and smelter on Big Backbone Creek, mine drainage



from mines in the hills that drain to Little Backbone Creek, effluent from septic tanks at Keswick and mine drainage from Iron Mountain which flows into Spring Creek, and sewage from the sewer farm at Redding. Report to be issued later.

*Russian River.* An inspection was made of the Russian River from Cloverdale to Monte Rio. All summer resorts were closed. At the present time there is virtually no pollution of the river between these points. There is undoubtedly pollution of the river in times of high water and probably pollution from overflowing cesspools from some of the resorts at the height of the season. Another inspection should be made in the middle of June, at the time when there are many people at the resorts and before the tributary creeks dry up.

### WATER SUPPLIES.

#### Applications for Permit Filed.

*Oakland, East Bay Water Company.* To continue to supply Alameda, Albany, Alvarado, Berkeley, Emeryville, Oakland, Piedmont, San Leandro, Richmond, San Pablo and other portions of Alameda and Contra Costa counties from existing ground and surface sources.

#### Permits Granted.

*San Fernando, San Fernando Mission Land Company.* Permit to supply water for domestic uses to the city of San Fernando from the existing four wells in the northwest part of town.

#### Plans Filed.

*El Centro.* Preliminary general plan of proposed water filtration plant.

### Inspections, Investigations, Reports and Conferences.

*San Fernando.* October 9. Reinspection of Mission Land Company's water plant as a basis for action on application for permit. Conditions found satisfactory. The city is soon to vote on a bond issue to finance an entirely new water system to replace service now rendered by two private companies.

*Los Angeles.* October 9. Trip to various points on the Owens River system in San Fernando Valley for purpose of collecting samples for analysis.

*Callexico.* October 16 and 17. A test was made on the municipal water filter. While the plant removes a large amount of mud, the effluent was found to still be objectionably turbid at times. Improvements in equipment now being made will probably result in better clarification.

*El Centro.* October 17. The city has voted bonds to provide funds for installation of a municipal water filter. The chlorinating apparatus has continued to get out of repair frequently and is not in service much of the time.

*Niland.* October 18. The water company here recently completed a new settling reservoir with facilities for treating the water with lime and soda ash. Apparently a very clear water is being produced.

*Calipatria.* October 18. Lime and soda ash are now being used to soften and aid in purifying the water. Copper sulphate is occasionally used in the settling basins to keep down vegetable growths. Greater basin capacity is needed here and satisfactory results are very difficult to obtain.

*Brawley.* October 18. The water plant here presents the neatest appearance of any in the Imperial Valley. Both of the large settling basins are now concreted and should do good work, so far as settling alone is concerned. An entirely satisfactory water will not be supplied until filtration and disinfection are added.

*Brawley, The Imperial Ice and Development Company.* October 18. This company has contracted with the Blaisdell Filtration Company for installation of a sand filter at its ice plant at Brawley. Plans are now under preparation.



*Glendale.* October 26. Attended meeting of Verdugo Water Company directors to discuss question of protecting supply of Glendale and Tropico against contamination. Local preference appears to be to pump domestic water from wells rather than chlorinate the Verdugo Canyon water originally used.

*Eldridge, State Home for the Feeble-Minded.* October 22. The institution has a dual water system. Water for drinking and purely household purposes is obtained from springs which feed into a natural storage reservoir in the hills west of the Home, whence it flows by gravity to the institution. Water for irrigation and flushing of toilets is pumped from the Sonoma Creek.

*Los Banos.* October 25 and 26. Investigation made in connection with hearing on the question of ordering filtration under the Sanitary Water Systems Act, as amended in 1917. Hearing scheduled for November 15.

*Vallejo.* October 9. An inspection was made along the creek from Green Valley Falls to the lower lake. Extensive animal pollution was found.

*Redding.* October 10. The chlorination apparatus of the Redding Water Company was inspected and the rate of chlorination was checked. It was found that the measuring indicator was approximately correct. Amount of dose is two pounds per million gallons.

*Kennett.* October 13. Reinspection made of Kennett Water Company's supply. Hypochlorite of lime is being added in a crude manner. Hypochlorite is dissolved in two fifty-gallon barrels and drained through a one-inch valve into mixing tank, from which it is pumped into inlet to pressure filter.

*Sisson.* October 15. Water obtained from springs on side of Mount Shasta. Runs along open ditch to 50,000-gallon reservoir, from which it flows into mains. Consumption said to be as high as 500 gallons per capita.

*Cloverdale.* October 31. Reinspection of water supply of Cloverdale. Conditions same as at last inspection. Water is pumped from two dug wells, situated about 600 feet from the Russian River, into concrete reservoir. Water in reservoir very clear. Conditions around well and reservoir are excellent. Monthly sampling advised.

## SWIMMING POOLS.

### Applications for Permit Filed.

Pinecrest Resort, San Bernardino County.  
Bakersfield, Kern County Union High School.  
Alameda, Neptune Beach.  
Los Angeles, Wilkinson College of Swimming.

### Temporary Permits Granted.

Pending investigation, temporary permits have been granted to operate the above-named pools.

## A LABORATORY FOR EVERY WATERWORKS.

The bureau is encouraging the installation of laboratories at waterworks throughout the state so that more frequent analyses, to control the purifying devices, may be obtained. An analysis monthly, as is now the custom in many waterworks plants, is insufficient in a great many cases, especially where the water is purified. Such results show only the condition of the water on the day that the sample was taken. It is highly desirable to know what the purifying devices are doing from day to day. A few waterworks officials have seen the value of such data and have installed laboratories at their plants. We have invited the men in charge of these laboratories to visit the laboratory of this bureau and receive instructions on the procedure and interpretation of analyses. Many have taken advantage of this offer and have found their visits to be worth while. Not only have chemists received instruction, but also a number of men without scientific training, as the routine water examinations can be made by almost any intelligent and interested person. Should any water company wish to consider installing a laboratory, this bureau shall be pleased to assist in every way possible.



**LABORATORY WORK.**

Bacteriological examinations of water—323, of which 205, or 63 per cent, showed contamination.

Chemical examinations of water—398 (partial).

Sanitary chemical examinations of water—21.

Chemical examinations of trade wastes—3.

Sand analyses—2.

**REPORT OF THE BUREAU OF FOODS AND DRUGS FOR  
OCTOBER, 1917.**

E. J. LEA, M.S., Director.

During the month of October the Bureau of Foods and Drugs received 386 samples of foods, drugs and miscellaneous materials.

The official samples collected by the inspectors of this bureau consisted of 5 samples of beverages; 2 of bread; 1 of butter fat; 2 of cake; 1 of chocolate; 1 of coffee; 9 of condiments; 10 of confectionery; 8 of eggs; 4 of egg substitutes; 5 of extracts; 7 of gelatine; 1 of ice cream; 1 of jelly powder; 109 of liquors; 16 of meat; 2 of meringue powders; 3 of milk; 21 of molasses; 1 of noodles; 5 of spices; 1 of syrup; 23 of vegetables; 1 of walnut meats, and 12 of drugs of miscellaneous character.

The unofficial samples consisted of 55 samples of foods and food products and 2 of miscellaneous materials.

Samples of the following materials were submitted by the state institutions: Baking powder, butter, coffee, cream of tartar, extract of vanilla, flour, jelly, molasses, olive oil, oysters, rice, spices, tea and vinegar. They also submitted samples of ammonia, charcoal, chrome yellow, feed stuffs, linseed oil, soap and turpentine.

**"Near-Beer."**

During recent months the consumption of so-called "near-beer," especially in the vicinity of military camps, has greatly increased. Many samples of near-beer from different parts of the state have been submitted to this laboratory for analysis, in order to determine if they met the requirements of beverages sold to soldiers as nonalcoholic. Nearly all of the samples thus submitted have conformed to the requirements.

This laboratory assisted the San Francisco Board of Health in analyzing a large number of samples of near-beer, which had been collected by the police department. The 49 samples analyzed showed a variation in alcoholic content from none at all to 2.3 per cent. Nineteen of the samples contained between 1 and 2 per cent, while 30 samples contained 1 per cent or under.

**Material Destroyed.**

Upon physical and chemical examination quantities of the following food materials were found unfit for human consumption and were either destroyed or denatured so that they could not be used for human food: Beans, beef, bitters, coffee, smoked herring, salad oil and tomatoes. The beans were used for hog food and the salad oil was sold to a soap manufacturing plant.

**Cases Referred to District Attorneys.**

At the October meeting of the State Board of Health the following cases were heard and referred to district attorneys for prosecution under the provisions of the Pure Foods Act: The Colusa Cafe, Exchange Saloon, Main Street Saloon and Y. Tagata, in Colusa; The Palm Saloon and White House Saloon in Healdsburg; The Del Monte Bar, Gossler & Company, Mint Saloon, Messrs. Lynn & Lynn, and Frank Nunes in Hollister; The Food Supply Company in Los Angeles; The Menlo Market in Menlo Park; Armour & Company, Theo. Gier Wine Company, Newman, Korn & Company, Oakland Pioneer Soda Water Company and the United Canneries Company in Oakland; The Hotel Penngrove Bar in Penngrove; Capitol



Market and Palace Market in Redwood City; Bay Restaurant and Swalley & Duffy in Sacramento; Aiello Bros. & Company in San Jose; The Barrel House in Santa Cruz; Bianchi Bros., Cleveland & Shurmann and the Rose Bar in Santa Rosa; California Market and Pioneer Market in Taft; The Gilt Edge Saloon in Truckee; Paul Alaga, Miller & Leddy and S. S. Hildreth in Watsonville; California Canneries Company, Club Bottling Company, Dannemark Bros., Chas. C. Enkle, Pacific Buchu Gin Company, W. G. Salter, Smith-Robertson Company, Schwartz Ginger Ale Company, Tivoli Paste Company, Trask & Reineger and B. Winther in San Francisco.

The Pioneer Pharmacy, W. L. Helke, proprietor, at Sacramento, and the Pawnee Indian Medicine Company, Frank P. Burgess, proprietor, at San Francisco, were referred for violating the Pure Drugs Act.

### Convictions Reported During October.

There were 28 convictions obtained for violation of the foods and drugs acts, \$525 in fines being imposed; probation for six months was given in five cases.

N. J. Leavy, Baer-Fox Wine Company, Ciaccio & Foto, J. Hilf Wine Company and National Wine & Liquor Company, all of Los Angeles, were convicted for violating the Pure Drugs Act, in selling alcohol which was below standard. H. A. Cavassa, of South San Francisco, was also convicted for violating the Pure Drugs Act and paid a fine of \$50.

The following were convicted of violating the Pure Foods Act: Rockaway Beach Cafe, Rockaway; North Shore Hotel, San Rafael; M. Miller, Pinole; Golden Eagle Hotel, San Rafael; J. E. Rodgers, Colma; Allegrini & Yori, Redwood City; Joe Piscoli, Belmont; Drago Bros., Colma; Ratti & Minetti, South San Francisco; Guisti & Mencocci, San Pedro Valley; E. Galli, South San Francisco; Hawes & Tibbetts and S. Gianella, South San Francisco; E. Germain Wine Company, Los Angeles; Standard Baking Company, Wholesome Market, A. F. Winter, proprietor, San Francisco; C. C. Archambault and W. F. Foley, Stockton; A. Van Erp, Oakland; A. G. Naftz and Fred Crosby, Redwood City.

This bureau, under the provisions of the Penal Code, prohibiting false advertising, prosecuted and convicted one Leo J. Wertheimer, of San Francisco, for falsely advertising and falsely demonstrating a device known as a "butter merger." This case was heard in the San Francisco Police Court during October, and the defendant was convicted and sentence imposed of \$250 fine, or 250 days in the county jail. The fine was paid.

This so-called "butter merger" consisted of a tin cylinder about three inches in diameter and ten inches long, containing a plunger which served to mix milk and butter together. The advertising and demonstrations stated that the "butter merger" would make two pounds of butter from one pound of butter and one pint of milk.

The evidence presented to the court during this trial showed that a large number of people who heard the demonstrations were deceived into believing that two pounds of butter could be made from one pound of butter and one pint of milk. Many of the women who had witnessed the demonstration insisted that the statements were true because they had "seen it with their own eyes." In explaining the deception, witnesses for the state showed that standard butter contained 80 per cent of butter fat, while milk contained approximately 3 per cent of butter fat and 87 per cent of water. The "butter merger" simply mixed the butter with milk, which was largely water, and the resultant product was not butter, but simply a mixture of butter and milk which contained about 42 per cent of butter fat. The product made by this device is worth no more, from the consumer's point of view, than a pound of butter and a pint of milk mixed together. Two pounds of butter at the present market price are worth \$1.10, while the mixture of one pound of butter and one pint of milk is worth 55 cents plus 8 cents, or 63 cents.

After hearing the testimony the judge found the defendant guilty of violating the provisions of the Penal Code, prohibiting false advertising.

### Egg Substitutes.

In these days of conservation many new food preparations are appearing upon the markets, so-called "egg substitutes" are especially noticeable.



These preparations usually consist largely of starch, colored with coal tar dye, and sometimes contain a small amount of gelatine or other organic material.

These products are cheap, inferior substitutes for eggs, and do not possess either the commercial or the nutritive value of eggs. They are not only deficient in food value, but they are fraudulent in that the consumer pays entirely too much for these products.

#### Articles of Food in Cold Storage October 1, 1917.

Beer -----	6,992 gallons	Fruit—Continued.	
Butter -----	1,635,502 pounds	Pears -----	1,231,670 pounds
Cereals -----	2,034 pounds	Plums -----	69,591 pounds
Cheese -----	4,510,244 pounds	Quinces -----	214 pounds
Chocolate -----	2,500 pounds	Raspberries -----	1,500 pounds
Citron -----	450 pounds	Strawberries -----	144,180 pounds
Cocoanut -----	10,517 pounds	Horseradish -----	52,750 pounds
Confectionery -----	66,736 pounds	Lard -----	183,986 pounds
Eggs—		Lard substitute -----	3,799 pounds
Canned eggs -----	3,784 pounds	Meat (miscellaneous) -----	3,062,741 pounds
Cold stored -----	5,304,481 dozen	Mincemeat -----	11,478 pounds
Egg meats -----	425,500 pounds	Nuts -----	146,585 pounds
Frozen eggs -----	117,201 pounds	Nutmeats -----	465,922 pounds
Fish—		Paprika -----	1,065 pounds
Miscellaneous -----	781,750 pounds	Peanut oil -----	1,158 pounds
Pickled -----	295,400 pounds	Peppers, Chili -----	8,715 pounds
Shell fish -----	28,200 pounds	Popcorn -----	14,164 pounds
Flour -----	83,833 pounds	Poultry -----	1,625,303 pounds
Fruit—		Salad oil -----	3,440 pounds
Apples -----	3,440,487 pounds	Suetene -----	18,000 pounds
Blackberries -----	6,000 pounds	Sirup -----	2,387 pounds
Cranberries -----	26,040 pounds	Vegetables—	
Currants -----	15,899 pounds	Beans -----	11,095 pounds
Dried fruit -----	277,253 pounds	Celery -----	100 pounds
Fresh fruit (misc.) -----	10,048,478 pounds	Lettuce -----	50 pounds
Grapes -----	144,224 pounds	Mixed vegetables -----	150 pounds
Grapefruit -----	500 pounds	Mushrooms -----	16,610 pounds
Loganberries -----	50,874 pounds	Onions -----	10,603,352 pounds
Melons -----	2,520 pounds	Potatoes -----	81,918 pounds
Oranges -----	823,386 pounds	Tomatoes -----	358 pounds
Peaches -----	2,546,578 pounds	Turnips -----	180 pounds

### BUREAU OF REGISTRATION OF NURSES.

ANNA C. JAMMÉ, R.N., Director.

#### Inspection of Schools of Nursing.

During July and August there was no inspection made of schools of nursing, as at this time the two weeks vacation is usually given each student; superintendents and instructors are also having their vacations; the summer courses at the university are attracting instructors and others in institutions, and at this time the Director takes her allotted time for vacation.

With the beginning of September the work for the year was started. Heretofore it has only been possible to get to each school once during the year and twice in a few cases where it has been found necessary. The seventy-two schools now on the accredited list are largely scattered through the state, which entails considerable travel in order to visit each school at least once during the year. The time that has been possible to give to each has been too short to obtain the best results. It should be possible for the Director to remain long enough in any one school to attend some of the class and laboratory instruction, to observe the bedside work and the important details of nursing procedure. Occasionally she had the good fortune to come in on a demonstration class and thus had the opportunity to observe the character of instruction given in nursing procedures, the work of the students, and their individual adaptability to instruction.

In view of the fact that the board will require high school preparation for entrance to schools of nursing, it has been found helpful for both schools to visit



the high school in the neighborhood of the training school at the time of inspection of the latter. The Director meets constantly with hearty and interested cooperation of the principals and a strong willingness to meet the demand for the studies considered necessary as preparation for nursing. Beyond this there is a real practical cooperation in arranging for classes in the high school for students of nursing now in the training schools. These classes are arranged, in most cases, exclusively for the student nurses in such subjects as chemistry, physics, nutrition and cookery, biology, physiology, bacteriology and hygiene. With the high-grade teacher, found in our high schools, the well-equipped laboratories for all of these subjects, this offers an invaluable opportunity for the students of nursing. An example of this may be seen at the Los Angeles High School, where students from the Good Samaritan, the Children's, and Clara Barton hospitals form one class for chemistry and physics, going to the high school for two afternoons of the week. This occurs not only in cities, but likewise in the small town and country districts, which affords as great opportunity for the small rural school as for the large city school. Of the schools of nursing visited during September and October, all but a very small number were sending their students to the high school for some of the above-mentioned subjects.

The Director has given several talks to the high school girls on the vocational and professional aspect of nursing, giving the preparation and qualification for the work, the course of study and life of the student in the school of nursing, the opportunities and business side of the work following graduation. Such talks have been given in the Lowell, Girls and Polytechnic high schools in San Francisco, and at the Santa Monica High School.

Coincident with the work of inspection is that of meeting with the superintendents, instructors and head nurses of the various groups of schools in the different localities. The Director endeavors to meet as frequently as possible with the northern and southern branches of the State League of Nursing Education, to which belong the greater number of the faculty of our best grade schools. These meetings are held each month in San Francisco and Los Angeles for the purpose of discussing methods of teaching and practice in the schools.

Following are the schools inspected during September and October:

<i>September.</i>		<i>October.</i>	
St. Luke's Hospital-----	San Francisco	Pasadena Hospital -----	Pasadena
Mary's Help Hospital-----	San Francisco	Clara Barton Hospital-----	Los Angeles
Fairmont Hosiptal -----	San Francisco	County Hospital -----	Los Angeles
San Francisco Hospital---	San Francisco	Children's Hospital -----	Los Angeles
St. Francis Hospital-----	San Francisco	Angeles Hospital -----	Los Angeles
German Hospital -----	San Francisco	California Hospital -----	Los Angeles
Hahnemann Hospital -----	San Francisco	Methodist Hospital -----	Los Angeles
Children's Hospital -----	San Francisco	Good Samaritan -----	Los Angeles
Vallejo General -----	Vallejo	Los Angeles Infirmary-----	Los Angeles
		Emergency and General----	Los Angeles
		St. Catherine's Hospital---	Santa Monica



## LIST OF COUNTY AND CITY HEALTH OFFICERS.

### Alameda County—

Dr. J. Hal Cope	Pleasanton
Alameda	Dr. A. Hieronymus
Albany	Dr. J. F. Diddle
Berkeley	Dr. J. J. Benton
Emeryville	Dr. A. T. Drennan
Hayward	Dr. F. W. Browning
Livermore	Dr. J. K. Warner
Oakland	Dr. Kirby B. Smith
Piedmont	Dr. Benj. T. Mouser
Pleasanton	Dr. J. Hal Cope
San Leandro	Dr. Luther Michael

### Alpine County—

Mr. Fred S. Dunlap—Markleeville

### Amador County—

Dr. G. L. Lynch	Amador City
Jackson	H. E. Kay
Plymouth	W. J. Ninnis
Sutter Creek	W. A. Burres

### Butte County—

Dr. L. L. Thompson	Gridley
Biggs	R. W. Simmons
Chico	W. H. Marshall
Gridley	Dr. L. Q. Thompson
Oroville	Dr. W. F. Gates

### Calaveras County—

Dr. George F. Pache	Angels Camp
Angels Camp	Dr. E. W. Weirich

### Colusa County—

Dr. G. W. Desrosier	Colusa
Colusa	Dr. G. W. Desrosier

### Contra Costa County—

Dr. W. S. George	Antioch
Antioch	Dr. W. S. George
Concord	Dr. F. F. Neff
El Cerrito	Dr. J. F. Diddle
Hercules	H. N. Belgener
Martinez	Dr. Edwin Merrithew
Pinole	Dr. M. L. Fernandez
Pittsburg	Dr. H. E. Peters
Richmond	Dr. Chas. R. Blake
Walnut Creek	Dr. C. R. Leech

### Del Norte County—

Dr. E. M. Fine	Crescent City
Crescent City	Dr. E. M. Fine

### El Dorado County—

Dr. S. H. Rantz	Placerville
Placerville	G. H. Wickes

### Fresno County—

Dr. G. L. Long	Fresno
Clovis	Dr. M. S. McMurtry
Coalinga	Dr. C. W. Hutchison
Firebaugh	Dr. H. J. Greven
Fowler	Chas. Chapman
Fresno	Dr. C. Mathewson
Kingsburg	Dr. J. A. Gillespie
Reedley	Dr. Chas. H. Traber
Sanger	Dr. Thos. F. Madden
Selma	Dr. Fred H. Williams

### Glenn County—

Dr. F. M. Lawson	Willows
Orland	Dr. S. Iglick
Willows	Dr. W. H. Walker

### Humboldt County—

Dr. Joseph Walsh	Eureka
Arcata	Dr. G. W. McKinnon
Blue Lake	Dr. Chas. N. Mooney
Eureka	Dr. L. A. Wing
Ferndale	Dr. A. P. Griffin
Fortuna	Dr. Orville Rockwell

### Imperial County—

Dr. R. K. McGuffin	Imperial
Brawley	Dr. Eugene Le Baron
Calxico	Dr. P. N. Sims
El Centro	Dr. F. A. Burger
Holtville	C. A. Johnston
Imperial	Dr. R. K. McGuffin

### Inyo County—

Dr. I. J. Woodin	Independence
Bishop	John B. Clarke

### Kern County—

Dr. C. A. Morris	Bakersfield
Bakersfield	Dr. P. J. Cuneo
Delano	Dr. J. R. Hicks
Maricopa	Dr. H. N. Taylor
McKittrick	Dr. Robert C. Dear
Taft	Dr. E. A. D. Jones
Tehachapi	Dr. N. J. Brown, Jr.

### Kings County—

Dr. C. L. Scott	Hanford
Corcoran	Dr. J. T. Peery
Hanford	Dr. B. Robbins
Lemoore	Dr. W. P. Byron

### Lake County—

Dr. W. E. Upton	Kelseyville
Lakeport	P. H. Millberry

### Lassen County—

Dr. W. E. Dozier	Susanville
Susanville	Dr. F. D. Walsh

### Los Angeles County—

Dr. J. L. Pomeroy	Los Angeles
Alhambra	Dr. F. E. Corey
Arcadia	Dr. Chas. D. Gaylord
Avalon	Dr. J. J. Peckham
Azusa	Dr. John E. Hill
Beverly Hills	Dr. Oscar H. Mueller
Burbank	Dr. E. H. Thompson
Claremont	Dr. F. W. Thomas
Compton	E. E. Elliott
Covina	Dr. J. D. Reed
Eagle Rock	Dr. C. H. Phinney
El Monte	Dr. S. L. Corpe
El Segundo	R. F. Davis
Glendale	Dr. R. E. Chase
Glendora	Dr. L. N. Suydam
Hermosa Beach	B. F. Brown
Huntington Park	Dr. W. Thompson
Inglewood	Dr. W. W. Reber
Long Beach	Dr. R. L. Taylor
Lordsburg	Dr. J. E. Hubble
Los Angeles	Dr. L. M. Powers
Manhattan Beach	Llewellyn Price
Monrovia	Dr. Chas. D. Gaylord
Monterey Park	Dr. J. S. Trehwella
Pasadena	Dr. Stanley P. Black
Pomona	Dr. N. J. Rice
Redondo Beach	Dr. D. R. Hancock
San Fernando	Dr. Benj. B. Ward
San Gabriel	Dr. Ruth Purcell
San Marino	Dr. W. LeMoyne Willis
Santa Monica	Dr. F. J. Wagner
Sawtelle	Dr. A. B. Hromadka
Sierra Madre	Dr. R. H. Mackerras
South Pasadena	Dr. C. F. Metcalf
Tropico	Dr. Wm. C. Mabry
Venice	Dr. W. M. Kendall
Vernon	Dr. L. J. Williams
Watts	Dr. E. J. Riche
Whittier	Dr. W. H. Stokes

### Madera County—

Dr. L. St. John Hely	Madera
Madera	Dr. L. St. John Hely

### Marin County—

Dr. J. H. Kuser	Novato
Belvedere	Dr. Florence Scott
Corte Madera	
Larkspur	J. R. McGuffick
Mill Valley	James V. Chase
Ross	Dr. Thos. U. Smyth
San Anselmo	Dr. O. W. Jones
San Rafael	Dr. W. F. Jones
Sausalito	Dr. Allen H. Vance

### Mariposa County—

Dr. F. L. Wright	Mariposa
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### Mendocino County—

Dr. S. L. Rea	Ukiah
Fort Bragg	Dr. L. C. Gregory
Point Arena	Conrad Nicks
Potter Valley	W. T. Eddle
Ukiah	Dr. Lew K. Van Allen
Willits	Dr. F. C. Gunn



# LIST OF COUNTY AND CITY HEALTH OFFICERS—Continued.

**Merced County—**  
 Dr. J. L. Mudd-----Merced  
 Gustine-----Dr. C. E. Stagner  
 Los Banos-----Dr. R. Jadarola  
 Merced-----Dr. H. Kylberg  
**Modoc County—**  
 Dr. H. B. Ehle-----Alturas  
 Alturas-----Dr. John Stille  
**Mono County—**  
 Dr. C. W. Wood-----Bridgeport  
**Monterey County—**  
 Dr. J. A. Beck-----Salinas  
 Carmel-by-the-Sea-----J. F. Beardsley  
 King City-----Dr. D. Brumwell  
 Monterey-----C. A. Kiernan  
 Pacific Grove-----James P. Evans  
 Salinas-----W. E. Hallock  
**Napa County—**  
 Dr. O. T. Schulze-----Napa  
 Calistoga-----L. Randall  
 Napa-----Alex. Hull  
 St. Helena-----J. G. Johnson  
**Nevada County—**  
 Dr. Carl P. Jones-----Grass Valley  
 Grass Valley-----Dr. G. E. Chappell  
 Nevada City-----Geo. H. Calanan  
**Orange County—**  
 Dr. A. H. Domann-----Santa Ana  
 Anaheim-----Dr. J. W. Truxaw  
 Brea-----Dr. W. W. Davis  
 Fullerton-----Dr. J. H. Lang  
 Huntington Beach-----Dr. G. A. Shank  
 Newport Beach-----J. A. Porter  
 Orange-----Dr. F. L. Chapline  
 Santa Ana-----Dr. J. I. Clark  
 Seal Beach-----Dr. J. Park Dougall  
 Stanton-----J. H. Swan  
**Placer County—**  
 Dr. John Manson-----Lincoln  
 Auburn-----Dr. G. H. Fay  
 Colfax-----Dr. R. A. Peers  
 Lincoln-----F. R. Elder  
 Rocklin-----Wm. H. Keeley  
 Roseville-----G. W. Lohse  
**Plumas County—**  
 Dr. B. J. Lasswell-----Quincy  
**Riverside County—**  
 Dr. James G. Baird-----Riverside  
 Banning-----Dr. L. M. Ryan  
 Beaumont-----Dr. F. D. West  
 Blythe-----Dr. W. H. Chapman  
 Corona-----Dr. W. S. Davis  
 Elsinore-----  
 Hemet-----Dr. H. O. Miller  
 Perris-----Dr. J. W. Reese  
 Riverside-----Dr. C. W. Girdlestone  
 San Jacinto-----Thomas Lloyd  
**Sacramento County—**  
 Dr. J. H. Leimbach-----Isleton  
 Sacramento-----Dr. G. C. Simmons  
**San Benito County—**  
 Dr. J. M. O'Donnell-----Hollister  
 Hollister-----Dr. J. M. O'Donnell  
 San Juan-----Joseph De Lucchi  
**San Bernardino County—**  
 Dr. L. M. Coy-----San Bernardino  
 Chino-----Dr. Elgar Reed  
 Colton-----Dr. J. A. Champion  
 Needles-----Dr. A. S. Parker  
 Ontario-----Dr. Calvert L. Emmons  
 Redlands-----Dr. F. H. Folkins  
 Rialto-----Dr. L. P. Barbour  
 San Bernardino-----Dr. F. M. Gardner  
 Upland-----E. R. Bowman  
**San Diego County—**  
 Dr. O. G. Wicherski-----San Diego  
 Chula Vista-----Dr. Lella Latta  
 Coronado-----Dr. Raffael Lorini  
 East San Diego-----Dr. C. R. Carpenter  
 El Cajon-----Dr. Chas. R. Knox  
 Escondido-----Dr. B. L. Crise  
 La Mesa-----Dr. L. W. Zochert  
 National City-----Dr. Will L. Allen  
 Oceanside-----Dr. R. S. Reid  
 San Diego-----Dr. W. W. Crawford

**San Francisco (city and county)—**  
 Dr. W. C. Hassler-----San Francisco  
**San Joaquin County—**  
 Dr. John T. Davison-----Stockton  
 Lodi-----Dr. S. W. Hopkins  
 Stockton-----Dr. Linwood Dozier  
 Tracy-----Dr. J. G. Murrell  
**San Luis Obispo County—**  
 Dr. C. J. McGovern-----San Luis Obispo  
 Arroyo Grande-----Dr. H. A. Gallup  
 Paso Robles-----T. A. Hurley  
 San Luis Obispo-----W. F. Cook  
**San Mateo County—**  
 Dr. F. Holmes Smith-----San Bruno  
 Burlingame-----Dr. Jane H. Parkhurst  
 Daly City-----Dr. A. H. Rankin  
 Hillsborough-----C. M. Hirschey  
 Redwood City-----Dr. J. L. Ross  
 San Bruno-----Dr. F. Holmes Smith  
 San Mateo-----W. C. McLean  
 So. San Francisco-----Dr. J. C. McGovern  
**Santa Barbara County—**  
 Dr. G. S. Lovern-----Santa Barbara  
 Lompoc-----Dr. C. B. Constable  
 Santa Barbara-----Dr. C. S. Stevens  
 Santa Maria-----Dr. O. P. Paulding  
**Santa Cruz County—**  
 Dr. Wm. H. Keck-----Santa Cruz  
 Santa Cruz-----Dr. A. N. Nittler  
 Watsonville-----Dr. F. H. Koepke  
**Santa Clara County—**  
 Dr. Wm. Simpson-----San Jose  
 Alviso-----Dr. J. I. Beattie  
 Gilroy-----Dr. J. W. Thayer  
 Los Gatos-----  
 Mayfield-----Joseph Ponce  
 Morgan Hill-----Dr. W. D. Miner  
 Mountain View-----Dr. A. H. MacFarlane  
 Palo Alto-----Louis Olson  
 San Jose-----Dr. D. A. Beattie  
 Santa Clara-----Dr. G. W. Fowler  
 Sunnyvale-----Mrs. Norman Schofield  
**Shasta County—**  
 Dr. S. T. White-----Redding  
 Coram-----  
 Kennett-----Dr. J. P. Sandholt  
 Redding-----E. A. Rollison  
**Sierra County—**  
 Dr. O. A. Eckhardt-----Downsville  
 Loyalton-----B. M. Wheeler  
**Siskiyou County—**  
 Dr. W. F. Shaw-----Yreka  
 Dorris-----Dr. A. A. Atkinson  
 Dunsmuir-----Herman Woodward  
 Etna-----Dr. W. H. Haines  
 Fort Jones-----S. R. Taylor  
 Montague-----Hugh W. French  
 Sisson-----Dr. Paul Wright  
 Yreka-----Dr. W. F. Shaw  
**Solano County—**  
 Dr. W. C. Jenney-----Vacaville  
 Benicia-----Dr. P. B. Fry  
 Dixon-----John C. Benson  
 Fairfield-----F. L. Morrill  
 Rio Vista-----Dr. Albert F. Wellin  
 Suisun-----Dr. A. G. Bailey  
 Vacaville-----W. F. Hughes  
 Vallejo-----Dr. E. A. Peterson  
**Sonoma County—**  
 Dr. J. H. Shaw-----Santa Rosa  
 Cloverdale-----E. E. Gibbons  
 Healdsburg-----Dr. J. W. Seawell  
 Petaluma-----Dr. R. B. Duncan  
 Santa Rosa-----Dr. Jackson Temple  
 Sebastopol-----Dr. J. B. Blackshaw  
 Sonoma-----J. H. Albertson  
**Stanislaus County—**  
 Dr. J. L. Hennemuth-----Modesto  
 Modesto-----Dr. J. W. Morgan  
 Newman-----Dr. H. V. Armistead  
 Oakdale-----Dr. F. W. McKibbin  
 Turlock-----Dr. G. L. Wilson



# LIST OF COUNTY AND CITY HEALTH OFFICERS—Continued.

Sutter County—  
 Dr. I. W. Higgins-----Live Oak  
 Yuba City-----Dr. J. H. Barr  
 Tehama County—  
 Dr. W. F. Maggard-----Corning  
 Corning-----Dr. O. F. Rudolph  
 Red Bluff-----Dr. Walter Gavey  
 Tehama-----Dr. Mary B. Poket  
 Trinity County—  
 Dr. D. B. Fields-----Weaverville  
 Tulare County—  
 Dr. A. W. Preston-----Visalia  
 Dinuba-----Dr. H. W. Ensign  
 Exeter-----Dr. J. F. Dungan  
 Lindsay-----Dr. C. W. Locke  
 Porterville-----Dr. O. C. Higgins  
 Tulare-----Dr. J. B. Rosson  
 Visalia-----Dr. A. W. Preston

Tuolumne County—  
 Dr. Wm. L. Hood-----Sonora  
 Sonora-----W. H. Dennis  
 Ventura County—  
 Dr. A. A. Maulhardt-----Oxnard  
 Fillmore-----Dr. Will R. Manning  
 Oxnard-----Dr. Ralph W. Avery  
 Ventura-----J. H. Hardey  
 Santa Paula-----Dr. B. E. Merrill  
 Yolo County—  
 Dr. W. J. Blevins-----Woodland  
 Davis-----Dr. W. E. Bates  
 Winters-----Dr. R. E. Peck  
 Woodland-----Frank Mumma  
 Yuba County—  
 Dr. J. H. Barr-----Marysville  
 Marysville-----Dr. A. L. Miller  
 Wheatland-----W. H. Niemeyer



## List of Diseases Reportable by Law

Anthrax	Ophthalmia Neonatorum
Beri-beri	Paratyphoid Fever
Cerebrospinal Meningitis (Epidemic)	Pellagra
Chickenpox	Plague
Cholera, Asiatic	Pneumonia (Lobar)
Dengue	Poliomyelitis
Diphtheria	Rabies
Dysentery	Rocky Mountain Spotted (or Tick) Fever
Erysipelas	Scarlet Fever
German Measles	Smallpox
Glanders	*Syphilis
*Gonococcus Infection	Tetanus
Hookworm	Trachoma
Leprosy	Tuberculosis
Malaria	Typhoid Fever
Measles	Typhus Fever
Mumps	Whooping-cough
	Yellow Fever

\*Reported by office number. Name and address not required.

## Quarantinable Diseases

Cerebrospinal Meningitis (Epidemic)	Poliomyelitis
Cholera, Asiatic	Scarlet Fever
Diphtheria	Smallpox
Leprosy	Typhus Fever
Plague	Yellow Fever

Section 16, Public Health Act. All physicians, nurses, clergymen, attendants, owners, proprietors, managers, employees, and persons living in or visiting any sick person in any hotel, lodging house, house, building, office, structure, or other place where any person shall be ill of any infectious, contagious, or communicable disease, shall promptly report such fact to the county, city and county, city, or other local health board or health officer, together with the name of the person, if known, and place where such person is confined, and nature of the disease, if known.



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"GOD KEEP AND GUIDE YOU, SOLDIERS OF THE  
NATIONAL ARMY."

*To the Soldiers of the National Army:*

You are undertaking a great duty. The heart of the whole country is with you. Everything that you do will be watched with the deepest interest and with the deepest solicitude not only by those who are near and dear to you, but by the whole Nation besides. For this great war draws us all together, makes us all comrades and brothers, as all true Americans felt themselves to be when we first made good our national independence. The eyes of all the world will be upon you, because you are in some special sense the soldiers of freedom.

Let it be your pride, therefore, to show all men everywhere not only what good soldiers you are, but also what good men you are, keeping yourselves fit and straight in everything, and pure and clean through and through. Let us set for ourselves a standard so high that it will be a glory to live up to it, and then let us live up to it and add a new laurel to the crown of America. My affectionate confidence goes with you in every battle and every test. God keep and guide you!

—WOODROW WILSON.

*The White House, Washington.*

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